Public Utilities

FORTNIGHTLY

Volume XLIX No. 2 January 17, 1952

IMPACT OF EMERGENCY CONTROLS ON REGULATION

By Frederick Lavey

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Rated *versus* Actual Capacity for Power Production

By Hendrik A. Diamant

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What Will "Recapture" Mean for FPC Hydro Licensees? Part II.

By Samuel H. Crosby

« »

Utility Occupational Superstitions

By Henry F. Unger

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

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It is estimated that the cost of a ground survey on a large flood control project would have been over $3,000,000 and would have taken over 10 years. An Abrams Aerial Survey cut costs 90% — resulted in savings averaging over $5,000 a day. Time saved on the project was eight years.

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Public Utilities FORTNIGHTLY

VOLUME XLIX JANUARY 17, 1952 NUMBER 2

ARTICLES

FEATURE SECTIONS

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PUBLIC UTILITIES FORTNIGHTLY.. stands for Federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for nondiscriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

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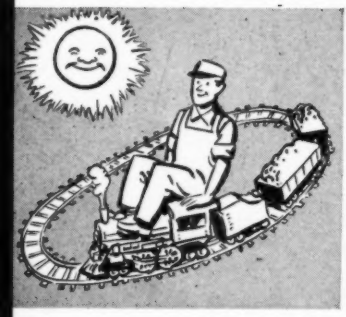
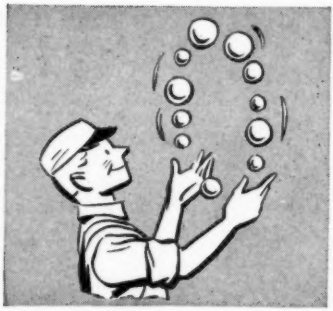
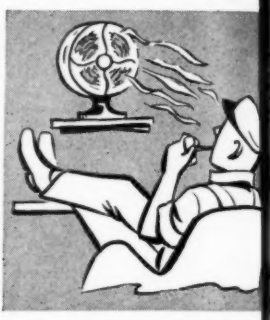
Five B&W Type E Pulverizers, serving a B&W Radi
Boiler of 800,000 lb. per hr. steam capacity.







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Recirculation of fines within the mill gives repeated, quick-drying contact with large masses of heated air and metal . . . produces proper fineness at all loads, even with coal as wet as it can get. Fines are classified in the mill.

UNIFORM PERFORMANCE REGARDLESS OF WEAR

Balls and grinding rings wear together . . . assure uniform fineness regardless of attrition of the grinding elements . . . fineness automatically increases at reduced loads.

BLOWS CLEAN AIR – SAVES WEAR AND TE

Unique in pressurized operati
the Type E Pulverizer requi
remarkably little maintenan
of the primary fan, because
blows only clean air . . . is n
subject to the damaging ab
sion of entrained particles.

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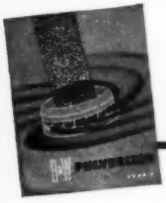
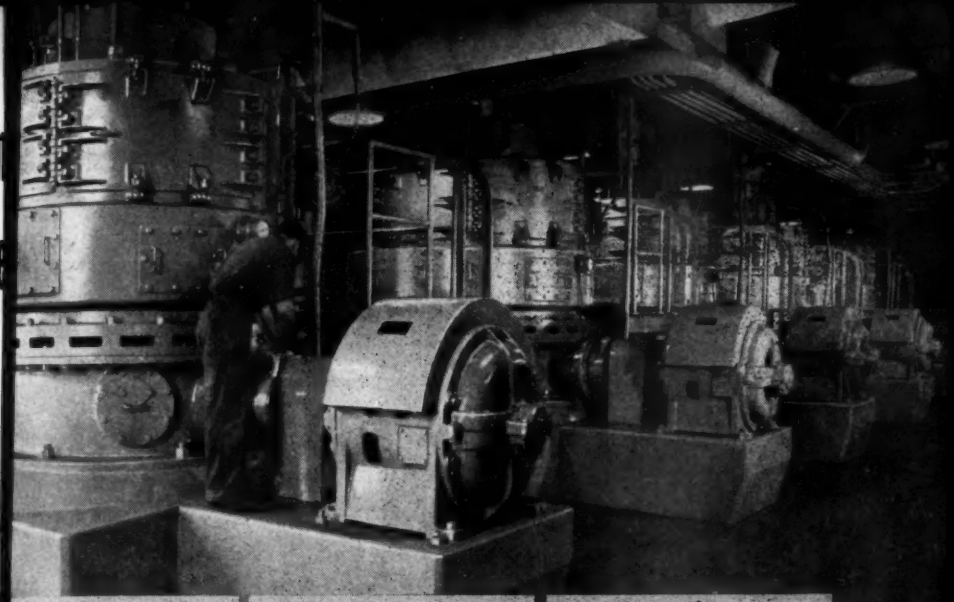


New Bulletin G-57 illustrates and describes the design, construction, operating and maintenance features of the Type E Pulverizer. Write: The Babcock & Wilcox Company, 85 Liberty Street, New York 6, New York.



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erati the accelerator on your au- equi bile . . . assures proper coal- tena mixture . . . produces de- ause rate of steam generation is n a wide range with coal con- g ab ns suitable for sustained s. combustion efficiency.

LOW POWER CONSUMPTION

Ball-and-ring grinding, anti-friction bearings, pressure lubrication, and automatic rejection of ungrindable materials make possible high output with minimum power demand.

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Availability and maintenance economy beyond today's most exacting requirements are proved in over 1300 Type E Pulverizer installations.

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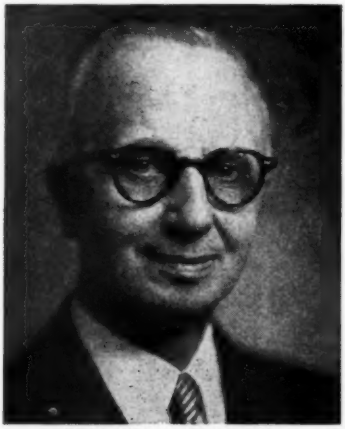
Pages with the Editors

It has been nearly a year and a half since the President launched his mobilization program with a series of executive orders setting up a hurried pattern for emergency control agencies. But it was only a year ago, in the celebrated Executive Order 10,200, issued January 3, 1951, that the over-all emergency control setup as we know it today came into existence under the leadership of Charles E. Wilson.

It was this reorganization which gave us the present hierarchy of the Office of Defense Mobilization supported by two basic columns—material controls (Defense Production Administration) and price and wage controls (Economic Stabilization Agency). Supporting this two-column arch, appeared the underlying platform of operating agencies, which deal directly with business and utility executives—the National Production Authority, the Office of Price Administration, the Wage Stabilization Board, and such special agencies as the Defense Electric Power Administration and the Petroleum Administration for Defense, with authority over the gas utilities.

This is the organizational setup which has been functioning for a full year. How have these controls been working out? That is the main question Mr. Wilson is endeavoring to answer to the satisfaction of every single member of Congress. We know that prices have continued to rise, along with wages, despite multitudinous "ceilings" and the earlier "freezes." We know that materials in some categories are at last beginning to become desperately short under the pressure of military demands.



HENDRIK A. DIAMANT

But Mobilization Director Wilson is prepared to show that the rearmament program is not behind schedule, all things considered. Alleged lags between the placing of contracts and the commencement of production on military orders have been the cause of some criticism. There are those who want to know why the stores are still loaded with great amounts of nonessential civilian goods made of strategic materials.

Mr. Wilson recently told the newspapermen at a National Press Club luncheon that the time lag between getting planes, tanks, guns, etc., from the drawing board to the production line explained a great deal. He pointed out that there was no sense in cutting down on civilian items, thereby closing up factories, throwing people out of work, thus causing civilian discomfort—during the period of 1951 when orders for military goods were not ready to be placed into production. But at the same time he predicted that 1952 would soon show a different picture—with material shortages beginning to bite in deep, as the momentum of military production begins to hit its stride. Then, he said, we shall soon see how quickly some surplus inventory items can disappear.

If the advance allocations of copper and steel for the first quarter of 1952 are a reliable guide, the utilities will really feel the imposition of emergency controls much more keenly in 1952 than during the past year. Already it has been neces-

sary to issue some Federal orders restricting large-scale use of both power and natural gas in a few local areas. In the Pacific Northwest this was due to low water conditions affecting hydroelectric supply. In the Appalachian area, the restriction on new house-heating customers was due to the scarcity of steel for line pipe. It goes without saying that these shortages will surely be augmented in 1952 if copper supplies are cut in half and steel and aluminum allocations proportionately reduced. The regulation of utility service under shortage conditions will get a real test.

WHAT is evidently happening here is the superimposition of a whole series of abnormal controls on a group of industries, public utilities, which have for many years been operating under a conventional and well-established system of commission regulation. The objectives are so different. Commission regulation has always stressed the obligation of a utility to serve, but the emergency control orders during the forthcoming 12-month period may well move in the opposite direction and emphasize the utility's higher obligation *not* to serve, except under prescribed conditions covering essential use. The opening article in this issue by FREDERICK LAVEY, Washington attorney who has recently become associated with the business department of this publication, analyzes the impact of these emergency controls on conventional utility regulation.

* * * *

HENDRIK A. DIAMANT, whose article on the distinction between "capacity" and "capability" in power production begins on page 79, was born and educated in The Netherlands where he studied law and economics. He has been a member of the Wall Street fraternity since 1925. After a few years with the editorial staffs of Standard Statistics, Inc., and *The Commercial and Financial Chronicle*, he joined, in 1927, the organization of Stone & Webster and Blodget, Inc., the predecessor company of Stone & Webster Securities Incorporated, where his activities were concentrated on public utility underwriting and general security analysis. Since 1943 MR. DIAMANT has been public utility analyst on the research staff of Baker, Weeks & Harden, New York. He is a member of the New York Society of Security Analysts, Inc.

HENRY F. UNGER

* * * *

SAMUEL H. CROSBY concludes in this issue his article on what "recapture" means for Federal Power Commission hydro licensees (beginning page 89). In this second instalment of his 2-part analysis of hydroelectric licensing, the author describes certain future possibilities which must be considered by license holders.

* * * *

BY way of variation we present something of a novelty in this issue in the form of occupational superstitions in the utility business. It was written by HENRY F. UNGER, a professional writer now resident in Washington, D. C. MR. UNGER was a native of Cleveland, Ohio, attended John Carroll University in that city, and the University of Western Ontario (BA). He saw service during World War II with both the Army Engineers and the Navy.

THE next number of this magazine will be out January 31st.

The Editors

Coming IN THE NEXT ISSUE

★

SALARY STABILIZATION FOR UTILITY PROFESSIONALS

What is the difference between salary stabilization and wage stabilization under the emergency control setup? How does salary stabilization affect staff engineers, "house" lawyers, accountants, physicians, and other professionals regularly employed by utility organizations, state public service commissions, or other regulatory agencies? Joseph D. Cooper, executive director of the Salary Stabilization Board, gives us some of the answers in discussing salary stabilization to date.

ELECTRIC POWER AND THE AMERICAN WAY OF LIFE

We all know that it would be impossible to maintain the high living standards of the American public without an abundant supply of electricity. But electrification was a process that did not come by itself, following the launching of the industry in the days of Edison. It took research, planning, testing, and promotion, which are going on all the time to find new and better uses for electric power in industry and in the home. Titus G. LeClair, chief electrical engineer of the Commonwealth Edison Company in Chicago, has written an account of this progress from the practical operating viewpoint.

SELLING THE STORY OF TRANSIT'S NEED

It is getting trite to say that the trouble with traffic is too much traffic—too many automobiles for too few highways, etc. The transit industry, which must shoulder the responsibility for moving the masses, in physical as well as economic competition with other forms of transport, faces all too many problems. But the first, if not the hardest, is the job of getting its story across so as to awaken general recognition of transit's needs. Edward Dana, general manager of the Metropolitan (Boston) Transit Authority, gives us some down-to-earth views along this line.

PRECISION INSTRUMENTS IN UTILITY OPERATION

In electric utility generating stations across the nation, small instruments are taking over a major share of the operating burden, with resultant benefits to all. Tiny control mechanisms carry grave responsibility for safe and efficient service, doing away with much difficult and arduous labor in the utility plant. A. Bryan Marvin, of the public information bureau of Consolidated Edison Company of New York, covers this interesting facet of the business.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

How many is a bunch?

A BUNCH doesn't just come with a standard number of grapes.

Bunches vary in size. Some bunches are small. Some are big. The same is true of your customers' bills.

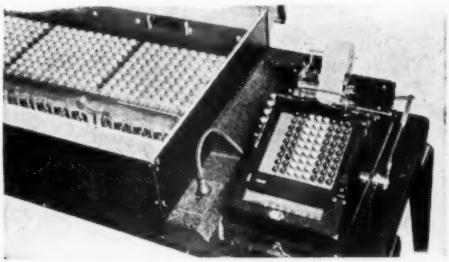
Proper analysis

When planning rate and promotional programs, therefore, it's mighty helpful to know just how your customers' bills fall into various kilowatt-usage categories.

The Recording and Statistical Corporation will provide you with such information about your customers' bills. Its special Bill Frequency Analyzer can process as many as 200,000 bills a day, and the cost to you is far less than if the work were done in your own offices.

May we send you complete facts about this accurate and economical method of compiling customers' usage data?

Write today for "The One Step Method of Bill Analysis." It may save you time and money in the months just ahead.



This Bill Frequency Analyzer—developed especially for utility usage data—automatically classifies and adds in 300 registers—in one step!

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Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

LESLIE GOULD
Financial editor, New York Journal American.

"Economy in government is needed more than higher taxes. Taxes are inflationary because the government is less efficient in its spending than the taxpayer."

HARRY FLOOD BYRD
U. S. Senator from Virginia.

"I don't see how there can be any tax increase from the present sources. The income on a Federal sales tax of 3 per cent, without any exemptions, for example, would bring in about $5 billion."

WILLIAM A. RECKMAN
President, Western Bank & Trust Company.

"If we believe the system of free enterprise is fundamentally sound, then let us do something to stop the increasing trend toward regimentation under the promise of the demagogue and politician that we will have security —but with an empty purse."

WILLIAM HENRY CHAMBERLIN
Columnist.

"Socialism in theory was a cosmopolitan, international force. But Socialism in power has gone in for nationalistic economics, for managed currencies, foreign trade controls. This is because Socialism leans heavily on planning, and planning is, by its nature, nationalistic."

JOHN L. COLLYER
President, B. F. Goodrich Company.

"Should taxation reach the point where private savings are inadequate to support proper upkeep and expansion of private means of production, the alternatives are either a declining standard of living as production facilities wear out, or the take-over of industry by government."

M. S. RUKEYSER
Columnist.

"A free society is not a foolproof system. It leaves the majority free to be wise or to be foolish. But the American system is based on the biologically sound concept of growth, and improvement, and it ill behooves the so-called totalitarian liberals to sneer at the Bill of Rights liberties."

JOSEPH STALIN

"American efficiency is that indomitable force which neither knows nor recognizes obstacles; which with its businesslike perseverance brushes aside all obstacles; which continues at a task once started until it is finished, even if it is a minor task; and without which serious constructive work is inconceivable."

GEORGE S. BENSON
President, Harding College.

"Let's sell our American public on what it is that makes America tick. We've allowed the propagandist to criticize competition and criticize private ownership of the tools of production, so that we've gotten to where we're afraid to tell the truth about our American way of life."

ROSWELL MAGILL
Tax attorney and former Under Secretary of the Treasury.

". . . why should the government be in the loan business while business is at the highest level of activity we have ever known? An austerity budget can afford no subsidies to business or to farmers, no Federal aid to education, no handouts to able-bodied veterans, and no pork barrel construction projects."

EDITORIAL STATEMENT
The Saturday Evening Post.

"Great Britain had a strong labor movement long before we did, but her workers still lack the luxuries which are commonplaces over here. Why? Mostly because her industries haven't been allowed to accumulate the capital with which to buy the gadgets which save drudgery. Here in America our so-called statesmen are determined to devise a tax system which seems designed to plunge us into the same disastrous plight."

LAWRENCE A. KIMPTON
Chancellor, University of Chicago.

"It is the tendency today when you get into trouble to turn to the Federal government. I regard that as the most pernicious trend of modern times. It may solve our immediate problem, but it is building up problems down the line that may force us at some point to change our entire way of life and for worse. In the final analysis, he who pays the fiddler calls the tune. Politics and bureaucracy move in slowly, but they move in."

Excerpt from The Guaranty Survey, published by Guaranty Trust Company of New York.

"One of the favorite accusations of the new self-styled 'liberals' against free private enterprise is its alleged lack of 'social responsibility.' Volumes could be written in answer to this charge. But what about the 'social responsibility' of the 'liberals' themselves? No faults or shortcomings of private enterprise can be nearly as dangerous as the misuse of power in a welfare state governed by officials whose sense of 'social responsibility' fails to keep pace with their authority."

R. H. KNOWLTON
President, Connecticut Light & Power Company.

"Public opinion apparently lends support to affording wage earners and salaried people income consistent with the cost of living. Unfortunately, it is not so generally recognized, however, that the investors in private enterprise, a majority of whom are people of modest means, are also entitled to consideration with resultant recognition of the fact that the dividend dollar which they receive has also been sharply reduced in buying power."

What truck will save you the most?

The answer's a cinch! The truck that'll save you the most is the one that fits your job the best. And that means a Dodge "*Job-Rated*" truck—one that's engineered for penny-pinchin' thrift on *your* job.

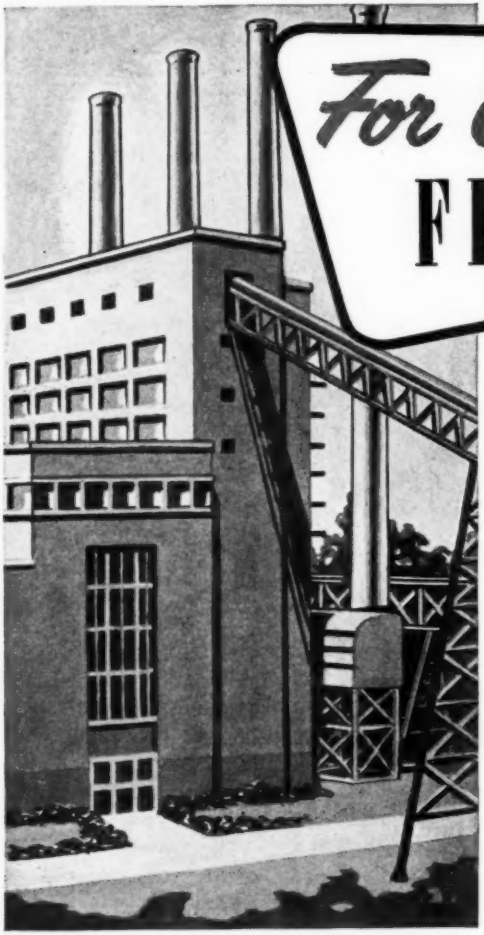
The engine of a Dodge "*Job-Rated*" truck is Scotch as can be with gasoline. You can thank its high-compression ratio for that. Upkeep costs are low, too, because a Dodge truck engine pares down costs with such values as chrome-plated top piston rings and exhaust valve seat inserts.

Count on a thrifty Dodge "*Job-Rated*" truck to give you more for your money right down the line. You'll get greater braking safety, easier bad-weather starting, easier handling, greater comfort, and smoother riding.

And you can get gyrol Fluid Drive on ½-, ¾-, and 1-ton models. This Dodge *exclusive* "cushions" power for easier driving and longer truck life. Ask for a demonstration.

For help and advice on the kind of truck which will save *you* the most, see your nearby Dodge dealer.

DODGE "Job-Rated" TRUCKS



For America's FINEST!

What makes a power plant outstanding? For one thing, it's the use of finest possible equipment throughout. Springfield Steam Generating Units are designed and built to meet the requirements of *America's Finest Plants!*

Springfield specializes in the production of a wide range of steam generating equipment for modern power plants. Springfield is organized to apply the same engineering skill to all contracts, large or small. *We will be glad to submit a proposal covering your requirements.*

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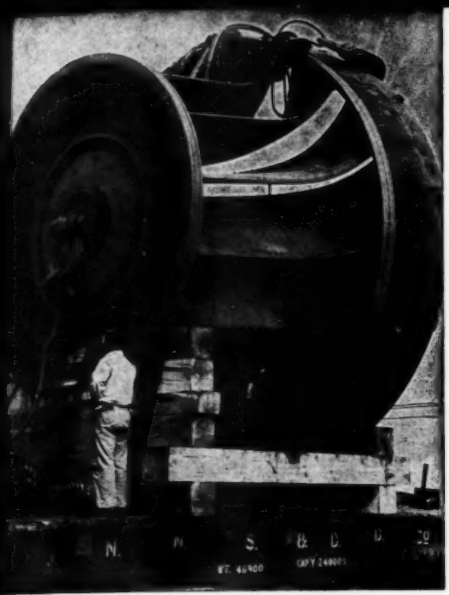
COMPLETE STEAM GENERATING UNITS

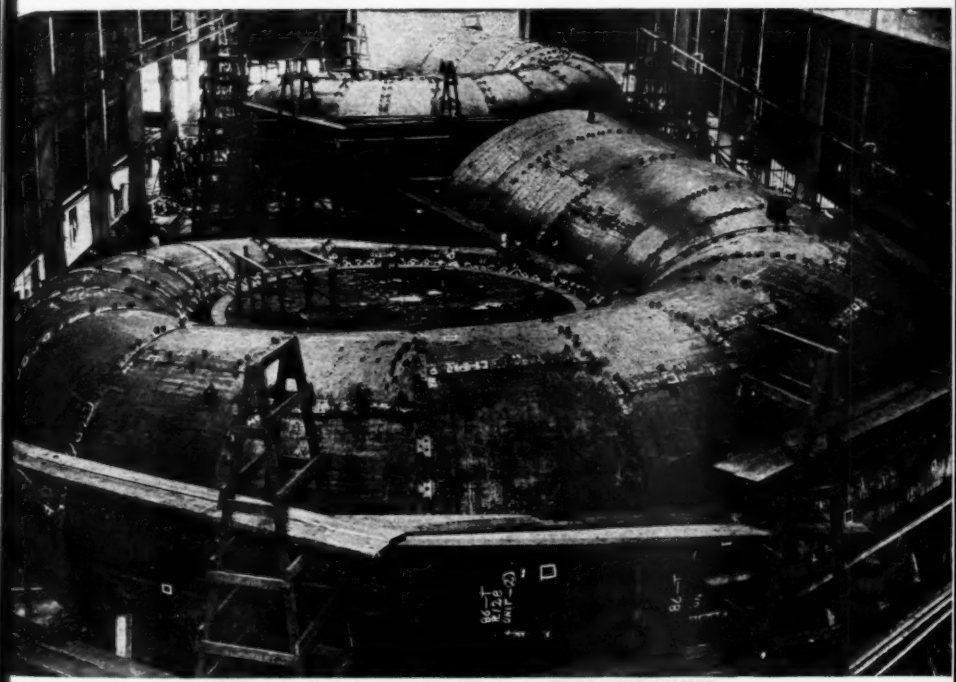
SPECIALIZING IN STEAM GENERATING EQUIPMENT SINCE 1890



RUNNER FOR BUGGS ISLAND DEVELOPMENT

OVER EIGHT MILLION HORSEPOWER

The Newport News Shipbuilding and Dry Dock Company has received orders for the building of hydraulic turbines aggregating output of 8,150,000 horsepower.



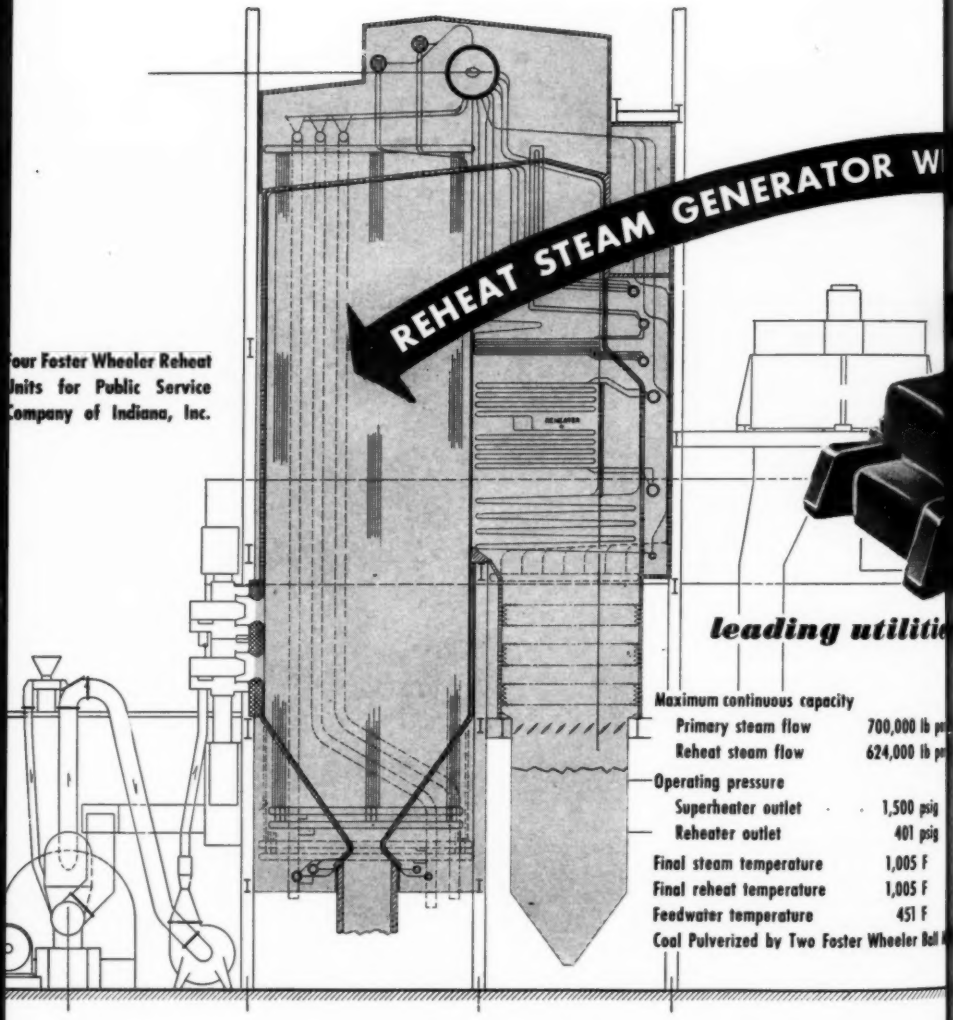
ASSEMBLY OF SPIRAL CASINGS FOR C. J. STRIKE DEVELOPMENT

NEWPORT NEWS

SHIPBUILDING AND DRY DOCK COMPANY

Newport News, Virginia

Integrating



Four Foster Wheeler Reheat Units for Public Service Company of Indiana, Inc.

leading utilitie or

Maximum continuous capacity	
Primary steam flow	700,000 lb p
Reheat steam flow	624,000 lb p
Operating pressure	
Superheater outlet	1,500 psig
Reheater outlet	401 psig
Final steam temperature	1,005 F
Final reheat temperature	1,005 F
Feedwater temperature	451 F
Coal Pulverized by Two Foster Wheeler Ball M	

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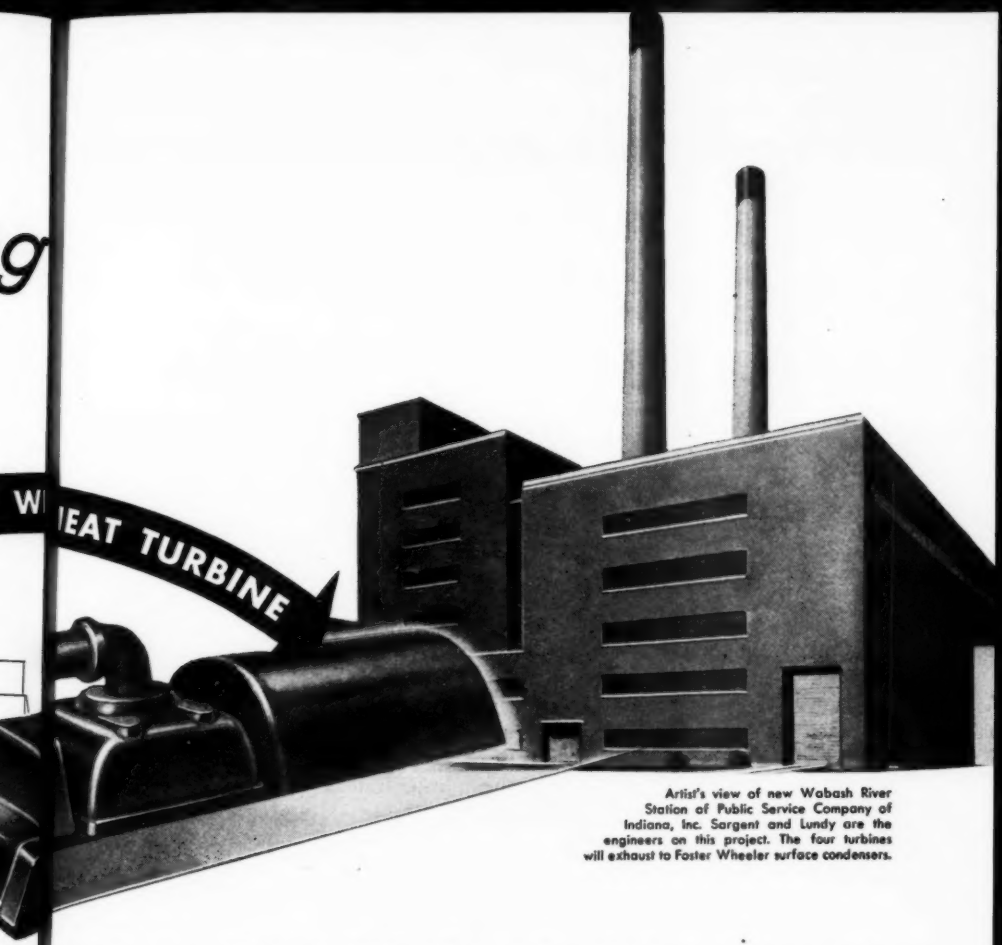

Artist's view of new Wabash River Station of Public Service Company of Indiana, Inc. Sargent and Lundy are the engineers on this project. The four turbines will exhaust to Foster Wheeler surface condensers.

...e ordering Foster Wheeler reheat steam generators

The large investment in present day power plant equipment dictates the careful selection of major components so as to avoid costly forced outages. Foster Wheeler engineers have always sought to refine the techniques of steam generation. They therefore took an early interest in the development of reheat where operating and control characteristics of the reheat boiler are integrated with those of the reheat turbine during every phase of service. Almost three decades ago, these engineers were responsible for the utilization of the characteristics of radiant and convection superheaters in series. Over "500 radiant superheater years" in one utility alone attest to the reliability of radiant surface for superheating.

The reheat steam generator illustrated is designed with a combination radiant and convection superheater and an all convection reheater. The chief advantages of this type of Foster Wheeler reheat steam generator may be listed as follows:

- complete freedom from furnace slagging is assured because furnace can be designed to suit fuel characteristics rather than reheat cycle duty requirements
- permissible wider selection of fuel of varying slagging characteristics
- location of the reheater deep in the convection zone assures safer metal temperatures during all starting, shutting down, and emergency operating conditions

This design also incorporates such features as:

- complete drainability of all superheating and reheating surfaces essential to quick and normal starts
- wide range of precise control of final steam temperature
- fully independent means of controlling primary and reheat steam temperatures.

These features provide for complete integrating of steam generating unit with turbine requirements under normal, quick start or emergency conditions.

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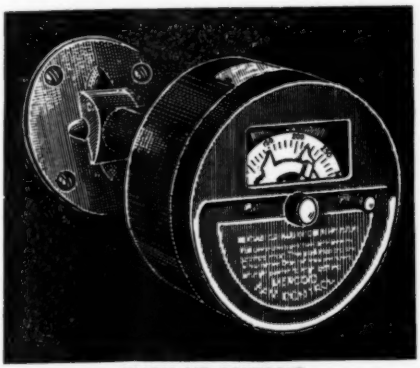

WARM AIR CONTROLS

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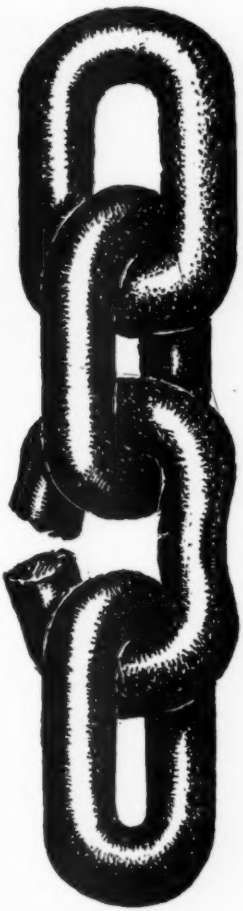
Where open contacts are used, they are exposed to dust, dirt and corrosion, and arc in the open, causing pitting and sticking of the contacting surfaces.

The Mercury Switch used exclusively in all Mercoid Controls is protected from the above handicaps, and operates indefinitely without any deterioration, thereby assuring that added safety and better performance.



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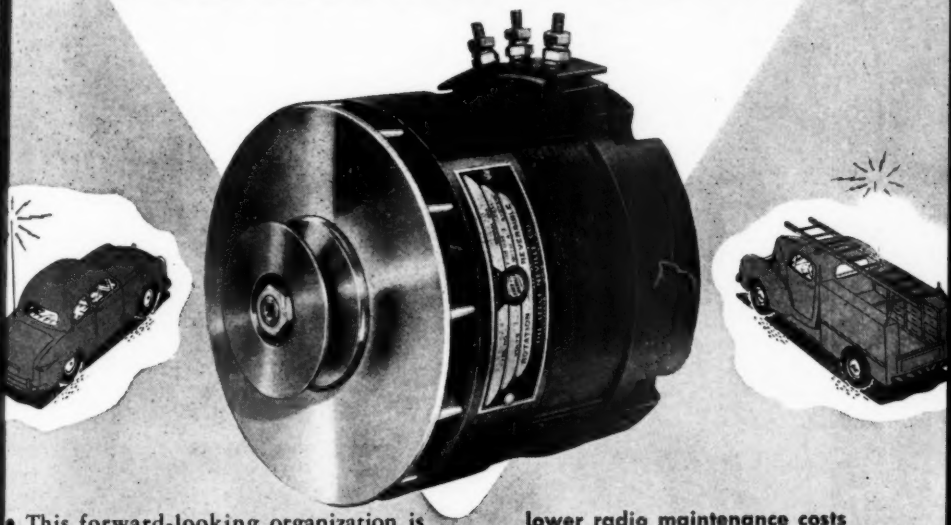

• This forward-looking organization is another one of the many Public Utilities who enjoy the advantages of the L-N Alternator System.

On *your* two-way radio cars and trucks . . . or wherever current demands are high . . . the L-N Alternator System will give you:

25 to 35 amperes with engine idling
new freedom from battery troubles
longer battery life
lower radio maintenance costs
more consistent radio operation

There are L-N Alternator Systems rated at 50 amps. and 80 amps. for 6-volt systems; 60 to 150 amps. for 12-volt systems.

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This photo shows Elliott teamw
at its best — three units vital to
nomical power generation, groupe
a single utility plant. In the same pl
although not shown in the photo,
also an Elliott surface condenser
an Elliott evaporator pre-heater.

Wherever quality performance
valued you are likely to find the Ell
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power plant equipment.

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DISTRICT OFFICES IN PRINCIPAL CIT

Utilities Almanack

JANUARY

17	Th	¶ *Edison Electric Institute, Merchandising Committee, begins meeting, Chicago, Ill., 1952.*
18	F	¶ *Canadian Electrical Association, Eastern Zone, Sales Division, ends meeting, Montreal, Quebec, Canada, 1952.*
19	Sa	¶ *Minnesota Telephone Association will hold annual convention, St. Paul, Minn., Feb. 5-7, 1952.*
20	S	¶ *National Association of Home Builders begins annual convention and exposition, Chicago, Ill., 1952.*
21	M	¶ *AGA Home Service Workshop begins, Chicago, Ill., 1952.* ¶ *American Institute of Electrical Engineers begins meeting, New York, N. Y., 1952.*
22	Tu	¶ *Canadian Electrical Association, Eastern Zone, General Division, ends meeting, Quebec, Quebec, Canada, 1952.*
23	W	¶ *Missouri Valley Electric Association will hold industrial and commercial conference, Kansas City, Mo., Feb. 7, 8, 1952.*
24	Th	¶ *Advertising Association of the West begins midwinter conference, Oakland, Cal., 1952.*
25	F	¶ *Edison Electric Institute, Depreciation Committee, will hold one-day meeting, New York, N. Y., 1952.*
26	Sa	¶ *Association of Railroad Advertising Managers ends two-day meeting, St. Louis, Mo., 1952.*
27	S	¶ *Public Information Program will hold East-North-Central region meeting, Columbus, Ohio, Feb. 19, 1952.*
28	M	¶ *American Society of Heating and Ventilating Engineers begins meeting, St. Louis, Mo., 1952.*
29	Tu	¶ *Pennsylvania Electric Association, Relay Committee, will hold winter meeting, Johnstown, Pa., Feb. 20, 21, 1952.*
30	W	¶ *Louisiana Telephone Association will hold annual convention, Monroe, La., Feb. 22, 23, 1952.*

Tapestry of Vulcan

Burner jets on boiler wall at Ninemile plant of Louisiana Power & Light Company.

Public Utilities
FORTNIGHTLY

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Impact of Emergency Controls On Regulation

Emergency controls have brought about some noteworthy changes in conventional utility regulation. Some may be just for the "duration." Some may stay longer. But, in any event, different policies with a different series of rules are now being superimposed from Washington upon the utilities and the commissions which ordinarily regulate them.

BY FREDERICK LAVEY*

IT is ironic, but true, that in emergencies threatening the continued existence of democratic government, military exigencies have required the temporary relinquishment of many advantages sought to be permanently maintained. Examples are the restrictions on trading; the imposition of censorship; the freezing of prices and wages.

In the present emergency, it might be of interest to have an interim review of the impact and effect of Federal emergency controls on another bulwark of democratic government—the regulation of public utilities by various commissions. There have been a number of Federal emergency controls affecting such regulation to date. Since it has been estimated that such controls implementing the defense production program may be needed until

*For personal note, see "Pages with the Editors."

middle or late 1953, it is by no means certain that more controls may not be imposed. Even at this point, such impinging controls on commission regulation already have proved a complicating and time-consuming matter. There are increasing indications of serious impediments to and interference with such regulation.

Inflation is one of the main factors in the present economy giving rise to increasing numbers of problems for state commissions. This condition, growing as it was after World War II, has been considerably aggravated by the defense production effort since the outbreak of the Korean War. It is not the purpose of this article to discuss this problem in detail. But a short summary of the situation resulting from inflationary conditions may serve as a background.

FOLLOWING World War II, the telephone and transit industries were about the first in the public utility field to require rate increases. Telephone companies experienced a large increase in business. The required expansion of facilities to handle the increased business necessitated large increases in capital investment, to pay for equipment which had increased in cost. With the consequent increase in the rate base, the rate of return became lower, and these companies have since needed three or four rounds of rate increases to alleviate this situation.

The transit industry has also needed three or four rounds of rate increases since World War II, but for different reasons. Primarily, transit companies experienced a decrease in patronage. In addition, there were mounting costs of operation, due in large measure to wage increases. These factors resulted in a lower rate of return for the industry.

Until recently, there had not been a significant number of applications for rate increases in the electric and gas utility fields, since World War II. However, there is every indication that state commissions will be required to decide a growing number of such applications in both these fields in the near future. Many electric companies within the past year have applied for rate adjustments, and the number is increasing.

THERE have not yet been, comparatively, as many applications by gas companies for rate increases, but there is no doubt that the number will increase soon. The Federal Power Commission is faced with the biggest backlog of gas pipeline company wholesale rate cases in its history, and additional cases are being filed there regularly as the result of inflationary trends. There were, just prior to the end of 1951, approximately ninety million dollars of suspended rate increases before the FPC. About $15,200,000 more have gone into effect under bond, and roughly $3,300,000 in rate increases have not been acted upon as yet.

If the FPC either grants such increases, or permits them to go into effect under bond, in cases where it has not been possible to act upon them within the five months' period permitted for suspension, it is expected that the increased rate payable by local gas distributing companies will require these latter companies to apply to state commissions for rate increases.

Where wholesale rates become effec-

tive under bond, state commissions will have additional problems in local distributing company rate cases. Since such increases under bond may be lowered if and when the FPC considers them at a later date, the state commissions cannot be certain that increased rates apparently needed by distributing companies may not be higher than necessary to reflect increased costs of gas. It has been indicated that some commissions may consider the increased wholesale rates under bond as the then legal rate and permit distributing companies to have rate increases to absorb these costs, *provided* the companies agree to rebate any excess rate attributable to reductions in wholesale rates later ordered by the FPC.

This uncertainty of rates *under bond* may also present correlative problems for state commissions in connection with the approval of issuance of securities for expansion of utility facilities. Underwriters of these issues may seriously question whether rates subject to possible reduction will provide sufficient and satisfactory revenue to protect the securities issued. Commissions will be required to give the underwriters some assurance in this connection to encourage needed expansion of facilities.

These are some of the present difficulties and problems of commission regulation of public utilities, created to a large degree by inflation aggravated by Federal activity in the defense effort. But there are other factors definitely affecting state commission regulation; namely, the following *specific* Federal emergency controls.

OPS Intervention in Rate Cases

SECTION 402 (e) (V) of the Defense Production Act provides that price and wage stabilization controls shall *not* be applicable to rates charged by any common carrier or other public utility, with one exception. No increase may be made in wholesale charges for property or services sold by any of these utilities, unless thirty days' notice is given to the Office of Price Stabilization with consent to the timely intervention by OPS before the Federal, state, or municipal authority having jurisdiction to consider such increase.

It should be noted that only wholesale, and not retail, price increases are subject to this condition. The Federal administration attempted to have the Defense Production Act amended to subject to price control all rates (including retail rates) of utilities *not* subject to Federal, state, or local regulation. The Kennedy amendment to the bill, which so provided, passed the House of Representatives but was omitted from the amendments to the act, as passed in July, 1951.

By October, 1951, OPS had officially intervened in thirteen cases. In May, 1951, the first instance of OPS inter-

"INFLATION *is one of the main factors in the present economy giving rise to increasing numbers of problems for state commissions. This condition, growing as it was after World War II, has been considerably aggravated by the defense production effort . . .*"

vention was in the proceeding before the Federal Power Commission concerning proposed wholesale natural gas rate increases for the Michigan-Wisconsin Pipe Line Company of Detroit. The second instance of OPS intervention was before the California Public Utilities Commission. There OPS opposed a million-dollar increase in electric rates proposed by California Electric Power Company. In this case, the rates affected would involve some sales for resale, and the appearance of OPS was not contested. By mid-August, 1951, OPS had intervened formally in nine wholesale rate increase cases. Two of these were electric rate cases before the California Public Utilities Commission, and seven were natural gas cases before the FPC.

A MORE recent case is its intervention in mid-September in the application of the Hope Natural Gas Company, before the Federal Power Commission, for a 16 per cent increase in wholesale rates for gas supplied to utilities in Ohio, Pennsylvania, West Virginia, and New York.

In addition to these formal interventions, OPS has also participated, at least on a regional level, in activities of an informal nature with respect to cases *not* involving wholesale rates. For example, the action, in the summer of 1951, of the Interstate Commerce Commission in granting railroad freight rate increases, was protested by OPS. It entered the case on an "advisory" basis. In another instance, an OPS regional office requested the New York Public Service Commission, the New York Telephone Company, and several passenger railroads in the New York area to submit facts and figures to justify proper telephone and rail fare increases.

These "extra-legal" activities of OPS in retail rate matters attracted critical notice in industry publications. PUBLIC UTILITIES FORTNIGHTLY commented on this situation in its August 30, 1951, issue (page 296). Recently an OPS official stated that state commissions were doing a splendid job and that indiscriminate and unnecessary intervention in public utility rate cases should not be supported by OPS at the national level. Presumably instructions to that effect have been given to regional headquarters, which have shown a tendency to act independently, on the basis of local sentiment against rate increases.

One effect of such Federal control has been that state commissions will be required to permit intervention and participation by OPS in these wholesale rate cases, and may feel obliged to permit intervention or activity by OPS in retail rate cases. To some extent this will certainly prolong the rate hearings and take additional time for the consideration and decision by the commissions of such cases.

Accelerated Amortization of Facilities for Tax Purposes

SECTION 124A of the Internal Revenue Code permits the grant, under certain conditions, of certificates of necessity for certain construction approved by the certifying authority. These certificates permit, for income tax purposes, the accelerated amortization over a period of sixty months of facilities attributable to defense purposes.

A number of public utilities have received such certificates for accelerated

How Controls Affect Regulation

"It is abundantly clear that state regulation of public utilities has been considerably affected by the imposition of Federal emergency controls. Past and potential intervention by the OPS in rate cases may lengthen the hearings on such rate cases and require additional consideration by the commissions. Accelerated amortization for tax purposes of emergency facilities may present many problems to state commissions in connection with subsequent rate matters."

amortization of facilities aggregating millions of dollars. For example, the first series of 29 tax amortization certificates for electric utilities, announced in latter June, 1951, permitted an average of 42 per cent accelerated amortization on amounts approximating $300,000,000. About 75 certificates had been issued to public utilities by the end of 1951.

The first reported instance of commission regulatory action, in connection with the treatment of the amounts of Federal income taxes saved as a result of such amortization, was taken by the Michigan Public Service Commission on August 8, 1951.[1] This was in the matter of an application of the Detroit Edison Company, filed July 9, 1951, for instructions with respect to accounting for the Federal income tax results of allowance for emergency defense facilities under § 124A, IRC. Detroit Edison obtained certificates of necessity for generation and transmission facilities amounting to $121,155,350, and had permission to amortize $53,823,400 of these facilities in sixty months.

The commission found that

(1) the primary effect of this special amortization is to reduce the Federal income taxes payable during the amortization period, and to increase such taxes payable thereafter during the remaining life of the amortized property;

(2) the current tax reductions of Detroit Edison resulting from such special amortization are subject to liability to the larger future Federal income taxes

[1] *Re* Detroit Edison Co. (Mich 1951) 90 PUR NS 76.

resulting from the amortization and "are not available for addition to surplus"; and

(3) the actual effect of the special amortization is not to create a windfall "but simply to defer Federal income taxes," since the aggregate income tax payments are the same "if the tax rate remains constant."

THE commission observed that its Classification of Accounts did not specifically prescribe a method of accounting to cover this matter. It therefore ordered the following, with respect to tax reductions due to such accelerated amortization: First, charge to "Provision for Deferred Federal Income Taxes," the amounts each year equal to the reduction in such taxes arising out of special amortization under § 124A, IRC. Secondly, after such amortization is completed or discontinued by Detroit Edison, and thereafter during the life of the property or until the earlier exhaustion to the reserve, (1) to charge the reserve and credit to "Portion of Current Federal Income Taxes Deferred in Prior Years," an amount equal to the increase in such taxes due to the prior special amortization of such properties; and (2) to charge to the reserve and credit to "Portion of Current Federal Income Taxes Deferred in Prior Years," an amount equal to any balance in the reserve for amortized properties retired during that year.

The obvious purpose of this order was to prevent the possibility of applications for utility rate increases at a later date, based on the contention that increased Federal income taxes, following the amortization period, made a rate increase necessary. Without a reserve created during the amortization period to accumulate amounts equivalent to the resulting tax reductions, this situation could most certainly create subsequent rate increase problems.

It remains to be seen whether other commissions will amend their Classification of Accounts to cover this matter or otherwise establish a similar procedure for such treatment by other public utilities.

It may be noted that the Michigan commission considered the aggregate income tax payments for such properties are the same "if the tax rate remains constant." It is possible, however, that if the tax rate becomes low enough in future years, it may take longer than the life of the properties to use up the reserve in charges against it for increased taxes attributable to the earlier accelerated amortization of such properties.

Federal Gas Service Curtailment Order

ONE of the Federal emergency controls particularly affecting commissions in 15 states and the District of Columbia—and creating much opposition—is PAD Order No. 2, effective August 22, 1951, issued by the Petroleum Administration for Defense, an emergency agency in the Department of Interior.

As therein stated: "In order to prevent shortages of gas needed for defense production and essential civilian uses, the order restricts expansion of natural gas markets by imposing limitations on the delivery of natural gas for space heating and large volume use." Subject to the provisions of the

Bow amendment to the Defense Production Act (discussed later), the order provides that no natural gas seller shall deliver natural gas (a) to a large volume consumer for the operation of any gas-fired equipment in an area listed in its Schedule A, or (b) for the operation of central space-heating equipment installed after August 22, 1951, except on certain stated conditions.

The principal effect of such conditions is to reduce the extension of natural gas service. It does not take gas away from any existing customers. The area listed in Schedule A includes: Connecticut, Delaware, District of Columbia, part of Kentucky and West Virginia, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Virginia, Wisconsin.

As early as April, 1951, PAD was considering the possibilities of such an order, at least for the winter of 1951-52, in order to assure defense industries continued gas supplies, and because of the shortage of steel for new gas pipelines. The necessity of this order was vigorously questioned by many state commissions and gas distributing companies in the area affected. Some state commissions were of the view that they were competent to handle the problems if and when they arose.

THE Bow amendment, added to the Defense Production Act in July, 1951, provides, in § 704 thereof, that no ruling, regulation, or order under this act, restricting the use of natural gas (either directly, or by restricting the facilities for consumption of natural gas, or in any other manner) shall apply in any state in which a public regulatory agency has authority to restrict the use of natural gas and certifies to the President that it is exercising that authority "to the extent necessary to accomplish the objectives of this act."

By December, 1951, seven states in the area affected—namely, Maryland, New Hampshire, Ohio, Pennsylvania, Virginia, West Virginia, and Wisconsin—had certified to handle their own gas service matters. New York and the District of Columbia have indicated they will not so certify. It is understood that as soon as natural gas becomes available in New England, other states there will also make such certificates. Certain states, such as Ohio, Minnesota, Wisconsin, and Indiana, had gas curtailment orders in effect prior to the PAD order. Shortly after issuance of the PAD order, Maryland

¶ "WHERE *wholesale rates become effective under bond, state commissions will have additional problems in local distributing company rate cases. Since such increases under bond may be lowered if and when the FPC considers them at a later date, the state commissions cannot be certain that increased rates apparently needed by distributing companies may not be higher than necessary to reflect increased costs of gas.*"

issued gas service restriction orders substantially the same. Aside from these, as of mid-September, 1951, no other action has been taken by other states on gas service curtailment, except in Virginia. In September, the Virginia Corporation Commission ruled that only a distributing utility and not a pipeline supplier may seek to restrict service to its customers. It therefore denied an application of Virginia Gas Transmission Company to restrict the use of gas for heating.

HOWEVER, it seems reasonably probable that most of these states, and possibly others, may be forced to take some action in the near future. First, PAD is planning to return all applications for exemption from its order, filed by individual gas utilities from any of the certifying states, and such utilities will be advised to approach their respective state regulatory commissions for relief. Secondly, PAD has recently served notice that gas service restrictions may be ordered in shortage areas, for reasons of national defense. In early October, PAD issued its Regulation No. 1, entitled "Issuance of Directives." The first directive called for a diversion of fuel oil to the Navy. PAD is understood to take the position that it retains the power to allocate supplies of gas (even though the states may restrict the *use* of gas) and such power in PAD, if exercised, could bring about a diversion of gas from some areas, which would most certainly require state commissions to restrict the use of the remaining supply.

Moreover, PAD retains control of allocations of pipe for new gas pipelines. By the use of such power, and diversion of scarce steel to certain areas, increased demands in various states for that limited supply of gas obtainable through existing pipelines may force state commission action.

Federal Electric Power Curtailment Order

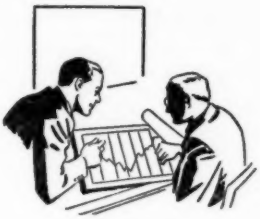
ON September 17, 1951, the Defense Electric Power Administration, an emergency agency in the Department of the Interior, issued Order EO-4, which terminates on March 31, 1952, unless earlier revoked. This order provides for the limitation of consumption and deliveries of electric energy in certain parts of the Pacific Northwest; namely, Washington, and those parts of Oregon, Idaho, and Montana within the service areas of certain electric utilities listed in its order, including Bonneville Power Administration, many co-operatives, municipal and private companies.

The stated necessity of the order was that increased power requirements for defense, civilian, and other use in this area, and seasonal changes in water conditions, threatened shortages of electric energy which will impair deliveries of such energy to defense industries and for essential civilian uses.

It may be noted that, whereas the PAD gas curb order restricted the service to *new* customers, this DEPA order would permit the elimination or reduction of use of electricity by *present* consumers.

The potential assumption of regulatory power by DEPA under the order is particularly broad. Especially notable are provisions that

(1) no electric utility shall take any



The Upward Trend in Utility Rates

"UNTIL recently, there had not been a significant number of applications for rate increases in the electric and gas utility fields, since World War II. However, there is every indication that state commissions will be required to decide a growing number of such applications in both these fields in the near future."

power plant equipment out of service for routine maintenance or overhaul when the capacity or operation of such equipment "is needed" in the Pacific Northwest shortage area;

(2) no electric utility shall abandon any electric generating facilities without specific authorization of DEPA;

(3) each electric utility shall continue to operate its reservoir, generating plants, substations, transmission lines, and other facilities *and* to interconnect electric energy with other electric utilities to achieve maximum coordination of power supply;

(4) "when necessary," DEPA will restrict or prohibit the use of electric energy (a) during designated hours and days by a consumer or class of consumers; and (b) during peak periods by any consumer or class of consumer; and no consumer shall take deliveries of energy except under such directions; and

(5) no electric utility or nonutility power producer shall serve a new consumer or existing consumer at a new location, without prior DEPA approval, if such service involves more than 100-kilowatt peak demand or more than 4,000 kilowatt hours a week.

THE restrictions contained in EO-4, effective whenever DEPA orders, fall into four kinds of limitations: (1) a prohibition against nonessential use, such as decorative lighting, store signs, cars and space heating, amusement lighting, etc.; (2) a restriction on increasing deliveries to large-scale consumers in excess of the amount used by such consumers during a base period (twelve months beginning July 1, 1950) with the right of DEPA to specify the base peak demand for any consumer at any time; (3) a quota limitation (beginning with interruptible demand) on deliveries particularly to large consumers, main-

ly aluminum, pulp and paper plants; (4) a reduction or cutoff of power service deliveries to consumers who have their own generating facilities. The order specifically exempts atomic energy plants and two other essential defense plants producing magnesium and chlorine chemicals.

It should be noted that there is absolutely no reference whatever in the order to a state regulatory commission. One representative of DEPA is authorized to exercise all its powers necessary to carry out the provisions of the order. This is an illustration of Federal regulation of matters normally within the jurisdiction of state commissions.

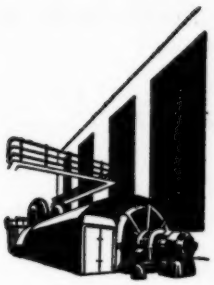
The curb on electric power service in the Northwest was put into effect for approximately a week in latter September, 1951. At that time, Bonneville Power Administration, acting under its contract terms for interruptible power to aluminum producers in that area, cut off electric power service to this group. With the improvement of water conditions in the Northwest, as a result of rainfalls, this service was ordered resumed, pending further developments of this situation.

Of interest in this connection were the emergency requests in mid-September, 1951, to regulatory commissions in the Northwest by utilities in that area for temporary rate increases to offset the increased cost of power. With idle steam plants brought on the line to fill the gap in hydro power—during the water shortage—these temporary rate increases would amount to a surcharge to cover actual amounts of extra costs, estimated to be from $5-$12,000,000 during the 1951-52 winter peak.

On October 3, 1951, the Oregon Public Utilities Commissioner denied the arrangements for relief requested in such an application of the Pacific Power & Light, Portland General Electric, and Mountain States Power companies. The commission recognized the propriety of recovering such actual excess costs and set forth procedure to be followed to obtain such surcharge relief. The companies proposed an initial surcharge rate based on estimates, to be adjusted at intervals to reflect actual costs. However, the commission ordered reports of actual excess costs as experienced, with supplemental tariffs, to be filed to cover the necessary surcharge for a particular period.

Summary

It is abundantly clear that state regulation of public utilities has been considerably affected by the imposition of Federal emergency controls. Past and potential intervention by the OPS in rate cases may lengthen the hearings on such rate cases and require additional consideration by the commissions. Accelerated amortization for tax purposes of emergency facilities may present many problems to state commissions in connection with subsequent rate matters. The PAD gas curb order, and the short supply of steel for gas pipelines, may require action for curtailment of gas service in shortage areas. The DEPA electric power curb order has placed in a Federal agency the power to decide many questions of utility service normally under state jurisdiction.



Rated *versus* Actual Capacity For Power Production

Is the electric industry handicapped by current usage of the two terms, "capability" and "capacity"? The term "capacity," as applied to generating equipment, has a long history. The origin of "capability" is obscure. But the implied distinction between the two is most uncertain. This author proposes to clear up the difficulty with specific recommendations of interest to regulatory as well as operating officials.

By HENDRIK A. DIAMANT*

WALL STREET security analysts are frequently jocosely referred to as "the literary men of finance," an appellation belied by the jargon which makes up so much of financial writing. But perhaps this writer will be forgiven if, on the basis of his twenty-five years' reading of utility reports, he hereby submits for consideration of the engineer-writers in the utility industry, a troublesome problem of semantics arising from the convolutions of mind and phrase in spoken and written utterances of these engineers.

Let us examine current usage in the electrical utility field of the two terms *capacity* and *capability*. These are revealed to be unfortunate and unnecessary examples of confused technical terminology. After that a suggestion will be made for the adoption of correct and uniform nomenclature which, it is hoped, will be acceptable to all who have to write and read about the activities of this important and at the same time complicated American industry.

Perhaps it is unnecessary to point out that public utility terminology has broader usage than that of the engineering world. The Securities and Exchange Commission since the middle thirties has brought into being a mass of documents. Security holders, investment companies, and security analysts, depend on these for much of their day-to-day thinking about the

*For personal note, see "Pages with the Editors."

current position of the utility industry. Then, too, there is the underwriters' attorney charged with drawing up or interpreting advisory reports, registration statements, or offering prospectuses. He has a claim to a demand for lucid technical terms. For these and the many others involved, any attempt to correct unsatisfactory terminology is its own excuse for being.

As a point of departure let us, with a constructive spirit, consider the annual reports of the Detroit Edison Company, in almost all other respects excellent examples of operational summaries. In its 1947 and 1948 annuals the Detroit utility, referring to load factors, speaks of "Per Cent Loaded (Based on Rated Generating *Capacity*)" and "Per Cent Loaded (Based on Approximate Safe Overload *Capacity*)." In its 1949 annual, however, the company tabulates its generating *capacity* as follows:

Electric Generating Capacity

Capability	
Rated *Capacity*—Name Plate	1,408,800 kw
Capability in Excess of Rated *Capacity*	136,000 kw
Total *Capability*	1,544,800 kw

This wording of the table seems to adopt the conception of a magic electric layer cake. The base of the cake—the flour—is *capacity*. On top of this base there is a thin but choice layer of fruit—*capability*. But as soon as one puts this choice layer on top of the base, a most wonderful transmogrification of the base from flour into the same fruit as the thin top layer, takes place. The whole cake becomes fruit — *capability*. Even an excess of a single kilowatt over the capacity would do this.

Apparently by 1951, when writing its 1950 annual report, the Detroit Company was not satisfied with the terminology in its 1949 report and resorted to this simplified, although still nebulous, statement:

Generating *Capacity*	Name Plate — kw 1,507,850
	Capability — kw 1,669,000

As will later be shown, the editors of these annuals are wrestling with a problem of industry terminology known to be faulty. They deserve credit for their attempt to follow the current more or less officially adopted labels. The result is vagueness.

Even a casual survey of the welter of utility reports will demonstrate the lack of uniformity which exists in the usage of the two terms. A considerable number of companies use *capacity* and *capability* as contrasting terms, in the manner of Detroit Edison.

For example, Northern States Power Company, in its offering prospectus of October 25, 1950, gives the following table:

Generating Units	
Rated Capacity KW	*Effective Capability KW*
586,410	660,280

In its 1950 annual report, the same distinction is made and effective *capability* is defined as ". . . the demonstrated dependable load carrying abilities of the . . . plants during peak period, as proven under actual operating conditions . . ."

Numerous other examples exist of virtually similar terminology. We need cite only a few: Consoli-

dated Gas, Electric Light & Power Company of Baltimore in its prospectus of January 24, 1951:

Rated Capacity Of Plant (Kilowatts)
585,500 (c)

(c) The present *capability* rating of all plants is 603,000 kilowatts under winter conditions and 588,000 kilowatts under summer conditions.

Montana-Dakota Utilities Company in its prospectus of July 25, 1951:

	Effective Capability In KW	*Total Rated Capacity In Kva*
(A specified unit)	14,000	16,875

Houston Lighting & Power Company, in its prospectus of November 15, 1944, heads its table of generating stations as follows:

Total Rated KW Capacity	*Net Effective Capability**
243,500	242,000

*"Net Effective *Capability*" as used herein represents the demonstrated dependable load-carrying abilities of the respective generating stations at the time of and for the duration of the company's annual peak load, as proved under actual operating conditions, less that *capacity* [! ! !] required for the operation of the auxiliaries.

MANY companies try to avoid the difficulty by using only one of the two terms, reserving the one term used—in most instances *"Capability"*—for the heading over the effective maximum of kilowatts and heading the rated column "Rated or Name Plate Kilowatts." In the *"Capability"* columns a variety of headings are found. Some companies speak of "Effective Capability," others of "Net Effective Capability" or "Dependable Capability" or "Net Dependable Capability." A few examples will suffice:

General Public Utilities Corporation in its offering prospectus of June 14, 1951, has the following headings:

Effective Capability (Gross KW)	*Name Plate Rating (KW)*
1,188,054	1,210,177

Virginia Electric & Power Company, offering prospectus May 25, 1951:

Name Plate Rating KW	*Capability (a) (KW)*
707,095	765,095

(a) Represents, for steam stations, generating *capability* after deducting station use requirements . . .

Public Service Company of Colorado, offering prospectus June 12, 1951:

Aggregate Name Plate Rating (KW)	*Effective Capability* (KW)*
306,235	338,300

*"Effective *Capability*" represents demonstrated load-carrying ability at the time of and for the duration of the annual system peak load.

STILL other companies are noncommittal, avoiding either term, under

¶ *"SINCE electric power cannot be measured by cubic content* (CAPACITY) *inasmuch as it does not have any, but can be measured by its ability to make* (CAPABILITY) *power,* CAPABILITY *would appear the more desirable term for kilowatt generating ability."*

rated or name plate kilowatts, but use *capacity* where the aforementioned companies used *capability*.

Instances of such usage can be found in American Gas & Electric's offering prospectus of March 19, 1951. It heads the first column "Name Plate Rating of Generators in Kilowatts," and the second column "Net Dependable *Capacity* of Generators in Kilowatts."

Delaware Power & Light Company in its prospectus of September 27, 1950, has the following:

	Kilowatt Name Plate Rating	*Net Effective Kilowatt Capacity*
(A specified unit)	15,000	16,920

Consolidated Edison Company of New York in its prospectus of February 27, 1951, heads the first column "Electric Rating of Main Generating Units (KW)," and the second column "Net Station *Capacity* (KW)." In a note explaining the meaning of "net station *capacity*," this prospectus speaks of "overload *capacity*."

Another kind of confusion, in the use of the two expressions, is encountered in the offering prospectus of June 6, 1951, of Georgia Power Company. This document has separate tables for its hydroelectric stations and its fuel-electric stations. For the hydro stations the headings are:

	Rated Installed Generator Capacity Kilowatts	*Net Maximum Plant Capability Kilowatts (a)*	*Minimum Capability in Kilowatts For One Hour Under Extreme Low Stream Flow Conditions (b)*
(One specified station)	45,000	56,000	44,000

(a) Net Maximum Plant *Capability* is the maximum load-carrying *capacity* [! ! !] of each individual plant (station undeducted) under the most favorable operating conditions for a period of one hour. The capabilities shown for the individual plants cannot necessarily be attained simultaneously.

(b) The minimum *capabilities* shown for the individual plants were not experienced simultaneously.

The tabulation of the fuel-electric generating stations has the following headings:

	Rated Installed Generator Capacity Kilowatts	*Net Dependable Plant Capability Kilowatts (a)*
(One specified station) ...	160,000	174,400

(a) Net Dependable Plant *Capability* is the maximum load-carrying *capacity* of each individual plant (station use deducted) under the most favorable operating conditions for a period of one hour. The capabilities for the individual plants cannot necessarily be attained simultaneously.

If this terminology is interpreted as stated in the above explanatory notes, *"capability"* is *"capacity."* In turn *"capacity"* must be *"capability."* The question then arises: Why use both terms for the same idea ?

The policy followed by some companies of avoiding the difficulty by being noncommittal in the heading of the rated kilowatts column does not always bring about the desired result. For example, Virginia Electric & Power in its quoted prospectus of May 25, 1951, uses two headings: "Name Plate Rating—KW" and *"Capability*—KW." The paragraph which follows the table carrying these seemingly one-term headings spoils the intended impression of one-term usage as follows:

> With the additions to generating facilities planned for completion in 1952 . . . generating *capability* in 1952 is estimated, with adverse hydro conditions, at 975,000 kilowatts for carrying the 1952 peak load, presently esti-

Promise *versus* Performance

"ALTHOUGH it is difficult to discover a well-defined difference between the assumed technical meanings of 'CAPACITY' and 'CAPABILITY,' the principal distinction appears to be that CAPACITY expresses nominal or purely theoretical amounts of kilowatts that the equipment can generate, whereas CAPABILITY expresses the amount that it can attain in actual use."

mated at 880,000 kilowatts. This *capability* does not include an undetermined amount of *capacity from* Buggs Island [a government development] which is expected to be available either to the company or for loads included in the peak load estimate.

This is something like adding cows to horses with a resulting total of cows.

How the Difficulty Arose—Federal Power Commission Terminology

THE term *capacity* as applied to generating equipment appears to have a long history. It probably was used exclusively or nearly exclusively for many years during the early development of electricity. The history of the use of the word *capability* is not so clear. In the search for its origin, it is gratifying to be able to report the co-operation received from various individuals, official trade organizations, and equipment manufacturers.[1] Apparently, *"capability,"* although not wholly unknown before, was used for the first time as a separate entity from *"capacity"* in or about 1934.[2]

In connection with an electric power survey, ordered by the President of the United States, on August 19, 1933, the Federal Power Commission requested the various utilities to fill out a form which had to be completed and returned to the commission on or

[1] Grateful acknowledgment is made of the co-operation received from Leon M. Fuquay, secretary of the Federal Power Commission, and Messrs. Day Wait and H. G. Carpenter of the commission's regional office in New York; also Colonel H. S. Bennion, managing director of Edison Electric Institute; J. H. Foote, vice president, Commonwealth Services, Inc.; M. E. Fisher, manager, Central station division of General Electric Company; and William Murvine, engineering consultant, Phoenixville, Pennsylvania.

[2] Its development from the phrase "capability of overload" is a distinct possibility. See Aumuller, *Novo Dicionario Técnico, Inglês—Português,* Rio de Janeiro, 1941.

before October 15, 1934. A footnote in this form referred to "installed *capacity* in kilowatts—sum of manufacturers' name plate ratings" and read: "Furnish actual plant *capability* if it is greater or less than this sum."

Significantly, however, in its "Glossary of Important Power and Rate Terms, Abbreviations, and Units of Measurement," published in 1936 as part of its electric rate survey, the FPC defined *capacity* but made no reference whatsoever to *capability* either as a main entry or in the definitions. This absence from the glossary — a compilation sponsored by the American Institute of Electrical Engineers and prepared with the aid of a great many leading public utility executives — provides strong evidence that *capability* was still a little used term, if, indeed, used at all.

IN 1937, the FPC, pursuant to provisions of the Federal Power Act, conducted a power survey. On page nine of Form 11-127 of this survey the following appeared: "Note—for purposes of this [report], plant *capability* is defined as the maximum rate of plant output under specified conditions." This, according to a private communication from the FPC, dated July 18, 1951, is "the first definition of *capability* to be found in early Federal Power Commission forms."

Beginning with the year ended December 31, 1937, the FPC has been annually obtaining information from the electric utilities on "Power System Statement," originally known as FPC Form No. 64 and now labeled FPC Form No. 12. On "Schedule 1, List of All System Generating Plants and Their Installed *Capacity*," of the December, 1937, form, the column pertaining to *capability* was headed "Plant *Capability*." The Power System Statement for the year ended December 31, 1940, indicated the first change in the *Capability* column of Schedule 1 with the new heading "Net Plant *Capability*."

In its glossary of 1949 (an expanded revision of the 1936 glossary) the FPC defines both *capacity* and *capability* in the following words:

Capacity — the load for which a machine, apparatus, or station is rated.

Capability — the maximum load which a machine, apparatus, station, or system can carry under specified conditions for a given time interval.

It also defines Dependable *Capacity* and Overload *Capacity* as follows:

Dependable Capacity — the load-carrying ability for the time interval and period specified when related to the characteristics of the load to be supplied. Dependable *capacity* of a station is determined by such factors as *capability* [! ! !], operating power factor, and position of the load which the station is to supply.

Overload Capacity—the maximum load that a machine, apparatus, or device can carry when operating beyond its normal rating but within the limits of the manufacturer's guaranty.

DESPITE the above distinctions set forth by the FPC, this agency does not seem to have always followed its own recommended practices. For example, its monthly data, "Electric Utility System Loads and Capacity," March, 1951, under the heading of June 4, 1951, carry the word *capacity*

throughout, speaking of installed *capacity*, dependable *capacity*, and net assured *capacity*. On page 4, however, the report speaks of "overload *capability*" of equipment, even though the 1949 glossary, as discussed above, calls it "overload *capacity*"![3]

Difficulties Involved

UNFORTUNATELY for the progress of human thinking, there is not a single word for every idea. With this the case, it frequently becomes necessary to express the idea by more than one word. A noun may require refinement by one or more adjectives. In business life, however, brevity of expression is essential, and, consequently, the search for expression of different things by the most succinct terms becomes fully understandable.

In dealing with the maximum ability of a piece of generating equipment, the industry engineers have to consider various maxima. If a utility orders a 100,000-kilowatt unit, the manufacturer makes certain that the unit can deliver at least 100,000 kilowatts and not, for example, only 98,000 kilowatts. He guarantees the 100,000 kilowatts and puts this amount on the brass name plate. This is the "rated" or "name plate" amount, usually called in the industry "*capacity.*"

Upon testing the equipment after it has been delivered to the customer, it may be found to be able to generate continuously an excess of power, perhaps 110,000 kilowatts, under certain specified "normal" conditions. Here, then, we have a second maximum. In an emergency, when demand is at an unusual peak, it may prove possible to run the equipment at, let us say, 115,000 kilowatts for an interval of one hour without risking any damage to the equipment. These 115,000 kilowatts constitute a third maximum.

THERE are several other maxima that may be considered. An electric utility plant needs some power for its own pumps, blowers, lighting, etc. If we deduct this "station use" from the foregoing maxima, we arrive at

[3] Equally little light on the correct use of *capability* is shed by the glossary which makes up the latest available edition of *"American Standard Definitions of Electrical Terms,"* approved by the American Standards' Association on August 12, 1941, and by the Canadian Engineering Standards' Association on March 2, 1942. This bulky volume was published shortly after these dates by American Institute of Electrical Engineers. This standard work contains a huge index to its definitions which lists *"capacity"* but does not make any reference to *"capability,"* again indicating that the term *"capability"* still was in comparatively little use.

¶ "ABANDONMENT *of the false distinctions between* CAPACITY *and* CAPABILITY *to express electric generating abilities, and use of a single noun, preferably* 'CAPABILITY' (*although exclusive use of* 'CAPACITY,' *as practiced in some documents, is considerably sounder and more lucid than the two-word practice*), *would establish uniform nomenclature. It would save many writers of utility papers the hesitations and embarrassment which now plague them.*"

still other maxima. If related to load factors, reserve capacity, interchange of power agreements, or balance between hydrogeneration and fuel-type generation, still another group of maxima may be arrived at. The exact technical differences are not important for the purpose of this discussion, but it is important to keep in mind that the plain term "maximum capacity" does not fill the bill. It is essential that one clearly expresses *what* capacity is meant. This the engineer does by further defining. He adds to the noun such adjectives as "rated," "name plate," "effective," "net effective," "dependable," "net dependable," "net assured," "overload," or he uses more elaborate definitions. No wonder that in an attempt to simplify at least some of these complicated expressions, recourse was taken to an additional word.

THE gradual introduction of the term *"capability"* since the late thirties or early forties appears to have been the result of increasing impatience on the part of electric production engineers with the patent inadequacy of the mostly unrealistic name plate ratings. As a protest against what, traditionally, had been called *"capacity"* and what, under the gradual development of larger interconnected systems and the introduction of more powerful and refined generating units, had ceased to be a reliable working standard, many in the industry began to refer to what the equipment actually could do, as *"capability."* Thus, *"capability"* was introduced as a distinction from *"capacity,"* and with what mixed results, we have already seen.

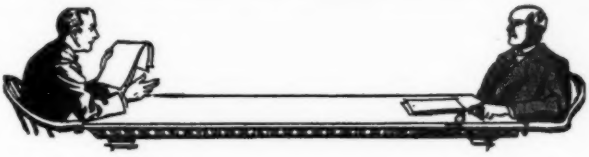
Analysis of Derivation of the Two Words[4]

ALTHOUGH it is difficult to discover a well-defined difference between the assumed technical meanings of *"capacity"* and *"capability,"* the principal distinction appears to be that *capacity* expresses nominal or purely theoretical amounts of kilowatts that the equipment can generate, whereas *capability* expresses the amount that it can attain in actual use. The rated or name plate 100,000 kilowatts of one of our foregoing examples is called *"capacity,"* the 110,000 kilowatts *"capability."*

Both terms are general words, used to express a variety of things outside of engineering or public utilities. In other words, we have here to contend with an attempt *to make a technical term out of a general term.* Here is the root of the trouble. Take the speed maximum of a ship. If the builder of the *Queen Mary* guaranteed delivery of a 28-knot ship that, however, on its trial run proved to be able to attain 30 knots, and we should speak of the ship's 28-knot rated *speed* in contrast with its 30-knot trial run *celerity* or *rapidity,* instead of using "speed" in both instances, we would be doing nothing stranger than the engineering and utility industry now does with its artificial distinction between *"capacity"* and *"capability."*

MOREOVER, the distinction between *"capacity"* and *"capability"* does not save any words. It remains just as necessary as before, possibly even

[4] For the philological discussion, as well as help in the organization of this paper, the writer is greatly indebted to his friend, Professor Irving Linn.



Broadened Interest in Utility Statistics

"PERHAPS it is unnecessary to point out that public utility terminology has broader usage than that of the engineering world. The Securities and Exchange Commission since the middle thirties has brought into being a mass of documents. Security holders, investment companies, and security analysts, depend on these for much of their day-to-day thinking about the current position of the utility industry."

more so, to define or refine the terms by the use of adjectives. These adjectives are the real storytellers.[8]

Conclusion

SINCE electric power cannot be measured by cubic content (*capacity*) inasmuch as it does not have any, but can be measured by its ability to make (*capability*) power, *capability* would appear the more desirable term for kilowatt generating ability.

Adoption of the exclusive use of "capability" to express maximum kilowatt generating ability of a generating unit, plant, or system would end the prevailing confusion in this particular aspect of technical nomenclature.

With these facts in mind, therefore, the writer urges the following coinages as best for the expression of the various aspects of the maximal limits of electric generators, plants, or systems.

Items encompassed within the notion of *capability:*

Electric Generating Capability (the general term)
Name Plate or Rated Capability
Effective Capability
Net Effective Capability
Dependable Capability
Net Dependable Capability
Overload Capability, and so on.

[8] According to the *Oxford English Dictionary, s.v. capacity* entered the language in the fifteenth century, adopted from the French *capacité,* itself adapted from Latin *capācitātem,* noun of state formed on *capāx, capāci*—able to take in. There seems no doubt that its root meaning signifies: power of holding or taking, *e.g.,* the capacity of a bus.

Capability, on the other hand, has no such ancient lineage. It is a malformation developed from the late Latin *capabilem* obviously influenced by *capāx. Capability* shares most of its meanings with *capacity.* However, the *Oxford English Dictionary* says (of *capability*) *"power or ability in general, whether physical or mental."* This is not so much *to take* as *to make.* Despite the many overlapping meanings of the two words (see also Merriam-Webster *New International* [unabridged] *Dictionary,* Second Edition) preponderance of evidence leans toward giving preference to *capacity* for the expression of cubic contents. By the same token, *capability* appears the more appropriate word to express ability to make.

Items encompassed within the notion of *capacity:*

Hydro-reservoir Capacity
Oil Tank Capacity
Coal Storage-yard Capacity

Correct wording would simplify the many now bewildering statements. Let us return to our first example of a table which (making necessary changes) reads as a statement of an individual's wealth, using comparable phraseology:

Mr. X's Riches

Wealth:	
Reputed (Rated) *Riches*	$100,000
Wealth in excess of Reputed *Riches*	35,000
Total *Wealth*	$135,000

A correctly worded statement would read:

Mr. X's Wealth

Estimated *Wealth*	$100,000
Excess of Actual *Wealth* over Reputed *Wealth*	35,000
Actual *Wealth*	$135,000

In like manner, our original example taken from the Detroit Edison statement, reading as follows:

Electric Generating Capacity

Capability:	*KW*
Rated *Capacity*—Name Plate..	1,408,800
Capability in Excess of Rated *Capacity*	136,000
Total *Capability*	1,544,800

would at once become lucid and considerably simpler, if corrected to read:

Electric Generating Capability

	KW
Rated *Capability*—Name Plate	1,408,800
Excess of Effective *Capability* over Rated *Capability*	136,000
Effective *Capability*	1,544,800

ABANDONMENT of the false distinctions between *capacity* and *capability* to express electric generating abilities, and use of a single noun, preferably *"capability"* (although exclusive use of *"capacity,"* as practiced in some documents, is considerably sounder and more lucid than the two-word practice), would establish uniform nomenclature. It would save many writers of utility papers the hesitations and embarrassment which now plague them. Never again, too, would the reader of such papers have to be disturbed and confused by awkward definitions which state that *"capability"* is *"capacity,"* or that *"capability"* partly includes *"capacity."*

The only distinction between *capacity* and *capability* to be made—merely based on their predominant meanings as general words—should be between ability to hold or contain (*capacity*) and ability to make (*capability*).

"SURELY, this thing called democracy is a precarious thing. It can easily wither here, as it has done in many places before, unless we keep our soil rich in the attributes which it needs for life. But if it is hard to preserve here it is even harder to transplant. We will be wiser, and avoid much heartbreak and disillusion, if we do not depend too much on the harvest in these foreign fields."

—EDITORIAL STATEMENT,
The Wall Street Journal.

What Will "Recapture" Mean for FPC Hydro Licensees?

PART II

In the second part of this analysis on hydroelectric licensing from the standpoint of "recapture," the author describes certain future possibilities which must be considered by certain Federal hydro license holders in the not too distant future.

BY SAMUEL H. CROSBY*

DURING the twelve years of congressional controversy concerning conservation of water power, the perennial questions of states' rights and Federal encroachments became quite an issue. There were solid blocks of stalwarts in both houses, usually held together by seasoned and astute southern leaders, who opposed the purposes of the Federal Water Power Act. This opposition was in some degree effective and the act includes provisions of special interest to the states and to their municipal corporations.

One of these, noncontroversial in substance, recognized the supremacy of the laws of all states "relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein."

Other provisions assure preference in the issuance of licenses—both original licenses and new licenses when the originals expire—to states and all municipalities; *viz.*, "a city, county, irrigation district, drainage district, or other political subdivision or agency of a state competent under the laws thereof to carry on the business of developing, transmitting, utilizing, or distributing power."

All licenses "shall be such as in the judgment of the commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or bene-

*For personal note, see "Pages with the Editors."

fit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes."

THE licensee must evidence full compliance with the laws of the state or states wherein the project will be located "with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes."[1] Any action or agreement in restraint of trade, for price fixing or other monopolistic practice, is prohibited.

In retrospect it is clear that the principal area of enlargement of Federal jurisdiction under the Water Power Act may not have been foreseen and was hardly discussed in congressional debates. The act defines "navigable waters" as "those parts of streams or other bodies of water over which Congress has jurisdiction . . . which either in their natural or improved condition notwithstanding interruptions between the navigable parts of such streams or waters by falls, shallows, or rapids compelling hand carriage, are used or suitable for use for the transportation of persons or property in interstate or foreign commerce . . ."

In a series of decisions running through a decade, our Supreme Court has extended the reach of FPC not only to water flows directly affecting the "navigable capacity" of waterways, referred to in the act, but from various rulings (and dicta) one must conclude FPC is not necessarily "off bounds" at the crest of the watershed. The honorable Court in a recent case applauded fluidity of judicial construction by this citation:

> Students of our legal evolution know how this Court interpreted the commerce clause of the Constitution to lift navigable waters of the United States out of local controls and into the domain of Federal control. Gibbons *v.* Ogden, 9 Wheat 1 to United States *v.* Appalachian Electric Power Co. 311 US 377.[2]

Appalachian is FPC's "New River" Case—one of its most far-reaching victories.

SAVING the status of licensees, the act declares that "the right to alter, amend, or repeal this act is hereby expressly reserved." As we have noted, such few amendments as have been made since 1920 are of minor importance. During the years immediately ahead the original 50-year licenses, under which many important projects are operating, will expire. Foresighted utility management already may be considering various changes in the law.

Advocates of public ownership may also have proposals to sponsor. Some, following the current aggressive leadership of the Department of Interior, might advocate a definite commitment to Federal acquisition of all major licensed projects. Such a purpose could be carried out by freezing the original licensees in substantially their present status until snowballing amortization and other applicable reserves will cancel the owners' "vanishing" net investment.

Co-operatives of the REA type may

[1] In First Iowa Hydro-Electric Co-operative *v.* FPC (1946) 328 US 152, 63 PUR NS 193, the Supreme Court approved a *diversion* in contravention of state law.

[2] Northwest Airlines *v.* Minnesota, 322 US 292, 303.

also wish to acquire some of the preferential rights now enjoyed under the act by public power districts, and other municipal bodies. There is ever-increasing interest in hydro power potentials, as we shall see. The gift of prophecy is not required to foresee probable major and well-organized efforts to amend the law when the proponents believe conditions are favorable.

THE right of the government is apparently clear to *"recapture"* any project "upon or after the expiration of any license . . . upon the condition that before taking possession it shall pay the net investment of the licensee . . . not to exceed the fair value of the property taken," plus severance damages in certain cases. The commission determines both "net investment" and "fair value."

"Net investment" is defined by the act as the "actual legitimate original cost" of the project, plus cost of additions and betterments, "minus the sum of the following items properly allocated thereto, if and to the extent that such items have been accumulated during the period of the license from earnings in excess of a fair return on such investment: (a) unappropriated surplus, (b) aggregate credit balances of current depreciation accounts, and (c) aggregate appropriations of surplus or income held in amortization, sinking fund or similar reserves, or expended for additions or betterments, or used for the purposes for which such reserves were created."

The act curbs administrative discretion by this unqualified mandate:

> In issuing . . . licenses . . . and in issuing licenses to new licensees under § 15 hereof the commission shall give preference to applications therefor by states and municipalities, provided the plans for the same are deemed by the commission equally well adapted, or shall within a reasonable time to be fixed by the commission be made equally well adapted, to conserve and utilize in the public interest the . . . water resources of the region . . .

Again, it is provided that

> . . . licenses for the development, transmission, or distribution of power by states or municipalities shall be issued and enjoyed without charge to the extent such power is sold to the public without profit or is used by such

STATUS OF MAJOR LICENSED PROJECT INITIAL COST CASES
As of June 30, 1951

	No. of Projects	*Present Installed Cap. (hp)*	*Claimed (B) Cost*	*Disposition*		
				Allowed	*Disallowed*	*Under Consideration*
Cases settled	112	5,150,699	$704,755,154	$631,565,878	$73,189,276	$ —
Cases pending (A)	69	1,693,709	287,089,465	—	—	287,089,465
Cases under construction, construction not started, or project not operating	11	1,056,290	142,228,251	—	—	142,228,251
	192	7,900,698	$1,134,072,870	$631,565,878	$73,189,276	$429,317,716

(A) Includes cases awaiting hearing by the commission, awaiting recommendations by staff, awaiting staff examination, and awaiting filing of licensee's cost statements.
(B) Claimed costs are estimated where statements have not been filed by the licensees.

state or municipality for state or municipal purposes . . .

STATE governments have been given considerable opportunities, hidden away in the following somewhat ambiguous section of the act:

> That the licensee shall pay to the United States reasonable annual charges in an amount to be fixed by the commission for the purpose of reimbursing the United States for the costs of the administration of this act; for recompensing it for the use, occupancy, and enjoyment of its lands or other property; *and for the expropriation to the government of excessive profits until the respective states shall make provision for preventing excessive profits or for the expropriation thereof to themselves, or until the period of amortization as herein provided is reached* . . . (Italics supplied.)

There is also this provision in the act:

> . . . the right of the United States or *any state or municipality* to take over, maintain, and operate *any project* licensed under this act *at any time* by condemnation proceedings upon payment of just compensation is hereby reserved.

Does not the study of these provisions of the Federal Power Act present a worthy challenge to all parties concerned with these hydroelectric licenses?

As the older licenses begin to expire, "municipalities" may apply for a 50-year renewal license on any project they may wish to acquire, unless and until the Federal government is committed to an expropriation policy. They may find a very co-operative FPC. They will have substantial sums to pay the original licensee, but not more than can be raised by low-interest bonds secured by the property.

Looked upon from another angle, a long-range program of expropriation of licensed hydro projects by the states might also contemplate the continuation of *private operation*. Our nation has drifted so far toward Federal ownership (both by legal title and equities) that the experiment of state ownership and private operation might be tested. Such state or municipal ownership would be beyond even the reach of Congress for taxation.

Any municipality interested in these various possibilities can discover from FPC the names and locations of licensed major projects within the area of their interest, the capacity, original cost, and dates of issue and expiration of the license. In the Northwest, for instance, the license on a certain 7,500-horsepower project will expire December 31, 1954.

How long does it take to amortize a project? At the expiration of a 50-year license here is an FPC calculation for one plant:

Installed capacity	297,500 horsepower
Ultimate installation .	510,000 horsepower
Invested capital	$ 28,300,807
Available for amortization	11,302,698
Licensees' net investment at expiration of license	$ 16,998,109
Average annual rate of reduction	—1.4%

The plant must be efficiently maintained by repairs and replacements. The assumed life of dams (as a basis for annual depreciation charges) is one hundred years. Depreciation reserves provide for maintenance.

Amortization, of course, accelerates rapidly as net investment shrinks. The

present basis for amortization accretions, as previously stated, is one-half the earnings in excess of 6 per cent on the net investment.

Concerning amortization, each project is on its own bottom and no two projects are likely to follow quite the same pattern. For illustration, Niagara Mohawk has installed capacity of 559,500 horsepower. The original cost found by FPC was $27,910,539. Southern California Edison's "Big Creek" project, with only 186,000 horsepower, cost $53,900,393. These projects are among the extremes of unit cost variations.

As already stated, Niagara Mohawk is in the U. S. Court of Appeals contesting FPC's order that $914,432.04 be credited to amortization reserves, representing one-half the company's earnings in excess of a fair return for the first five years of the amortization period. The principal issue in the case is Mohawk's claim of "assessable value" for water rights in the Niagara river which Mohawk contends are "vested rights." The sum in issue is of interest in this context because it illustrates the *slow start* of amortization —less than $200,000 annually for the first five years, derived from the largest privately owned hydroelectric plant in the United States.

As we have seen, another plant with about two-thirds of the capacity, the cost of the project being slightly more than Mohawk's, is expected to pay about 40 per cent of the investment in thirty years. This illustrates very well the acceleration principle.

THE need for ever greater electric utility service is inducing not only constant technological advancement in fuel generation but also continuous reappraisal of our water-power potentials, both great and small.

The willingness of New York state and of the Canadian governments to go forward immediately with the St. Lawrence project is noteworthy. The New York Power Authority's application for license under the Federal Power Act was denied and reported to the Congress as the act requires, "whenever, in the judgment of the commission, the development of any water resources for public purposes should be undertaken by the United States itself."

The organized opposition to the St. Lawrence waterway and power development both within and before the Congress has been successful for three or four decades.

ANOTHER king-size project, also controversial, recurrently swings into the foreground — Passamaquoddy! Competent hydraulic engineers are willing to stake their reputations on the practicability of teaming power from the wasting waters of dependable rivers in Maine, with the rhythmic power from the (even more) dependable Passamaquoddy tides. The Pacific Northwest has profitably demonstrated how readily heavy industry is attracted by a big, cheap power supply.

During the fiscal year ending last June, twenty-one applications for licenses for major projects were filed with FPC. Eighteen of these would produce an estimated 1,665,384 horsepower. Adding applications for preliminary permits, and three smaller license applications, a total of 2,841,934 horsepower was under consideration.

LIST OF SETTLED CASES OF INITIAL COST
I—CASES SETTLED

Project No.	Location	Licensee	Present Installed Capacity (Hp.)	Claimed Cost	Disposition: Allowed	Disposition: Disallowed	Disposition: Under Consideration
Privately Owned							
5	Montana	The Montana Power Company	154,000	$ 10,175,177	$ 9,163,752	$ 1,011,425	$ —
16	N. Y.	The Niagara Falls Power Company	559,500	44,453,869	27,910,539	16,543,330	—
18	Idaho	Idaho Power Company	13,300	910,257	897,358	12,899	—
20	Idaho	Utah Power & Light Company	20,000	3,560,872	3,372,649	188,223	—
67	Calif.	Southern California Edison Company	186,000	57,245,869	53,900,393	3,345,476	—
77	Calif.	Pacific Gas and Electric Company	12,500	3,883,792	3,661,307	222,485	—
78	Calif.	Pacific Gas and Electric Company	8,100	1,898,365	1,898,365	—	—
82	Ala.	Alabama Power Company	101,000	10,646,057	7,209,364	3,436,693	—
95	Calif.	Pacific Gas and Electric Company	Reservoir	190,789	188,291	2,498	—
96	Calif.	Pacific Gas and Electric Company	45,000	6,166,207	6,166,207	—	—
99	Calif.	Pacific Gas and Electric Company	2,815	740,230	705,839	34,391	—
108	Wisc.	Northern States Power Company (Wisc.)	Reservoir	1,207,019	910,270	296,749	—
120	Calif.	Southern California Edison Company	150,000	24,795,318	24,039,219	756,099	—
135	Ore.	Portland General Electric Company	80,000	10,473,318	9,925,270	548,048	—
137	Calif.	Pacific Gas and Electric Company	85,500	19,622,634	18,639,525	983,109	—
175	Calif.	Pacific Gas and Electric Company	48,000	5,633,862	5,250,173	383,689	—
176	Calif.	Escondido Mutual Water Company	1,334	517,990	532,098 (a)	(14,108)	—
177	Fla.	Florida Power Corporation	700	163,248	139,348	23,900	—
178	Calif.	Pacific Gas and Electric Company	14,500	2,097,230	2,097,230	—	—
184	Calif.	Pacific Gas and Electric Company	28,000	8,009,544	7,675,055	334,489	—
187	Calif.	Pacific Gas and Electric Company	9,000	1,361,409	1,361,409	—	—
190	Utah	Uintah Power & Light Company	1,600	138,555	138,555	—	—
204	Idaho	The Washington Water Power Company	1,700	232,500	232,500	—	—
(233a	Calif.	Pacific Gas and Electric Company	99,000	12,973,164	12,503,275	469,889	—
(233b	Calif.	Pacific Gas and Electric Company	Reservoir	1,883,819	1,672,822	210,997	—
271	Ark.	Arkansas Power & Light Company	92,500	8,816,505	7,914,421	902,084	—
287	Ill.	North Counties Hydro-Electric Company	5,300	609,491	618,542	(9,051)	—
289	Ky.	Louisville Gas & Electric Company	108,000	7,829,739	7,218,189	611,550	—
308	Ore.	Pacific Power & Light Company	1,100	93,292	93,292	—	—
309	Pa.	Pennsylvania Electric Company	38,400	11,032,817	5,672,054	5,360,763	—
344	Calif.	California Electric Power Company	3,000	495,890	495,890	—	—
346	Minn.	Minnesota Power & Light Company	18,000	3,451,175	2,720,179	730,996	—
349	Ala.	Alabama Power Company	135,000	17,551,300	15,328,092	2,223,208	—
372	Calif.	Southern California Edison Company	3,000	726,079	711,733	14,346	—
382	Calif.	Southern California Edison Company	14,400	3,161,097	2,464,102	696,995	—
401	Mich.	Michigan Gas & Electric Company	2,300	559,629	547,265	12,364	—
405	Md.-Pa.	The Susquehanna Power Company et al.	378,000	54,866,626	50,895,903	3,970,723	—
432	N. C.	Carolina Power & Light Company	147,000	13,841,400	13,148,586	692,814	—
457	Idaho	Idaho Power Company	85,800	559,873	557,712	2,161	—
459	Mo.	Union Electric Company of Missouri	201,000	36,024,117	34,868,427	1,155,690	—
469	Minn.	Minnesota Power & Light Company	5,000	1,421,063	1,395,156	25,907	—
472	Idaho	Utah Power & Light Company	40,000	3,278,470	2,964,074	314,396	—
486	Utah	Utah Power & Light Company	2,800	607,081	463,296	143,785	—
487	Pa.	Pennsylvania Power & Light Company	57,000	9,148,756	8,579,186	569,570	—
503	Idaho	Idaho Power Company	14,300	1,532,468	1,517,339	15,129	—
516	S. C.	South Carolina Electric & Gas Company	180,000	21,648,232	20,123,971	1,524,261	—
539	Ky.	Kentucky Utilities Company	3,000	532,159	532,159	—	—
597	Utah	Utah Power & Light Company	2,700	518,555	360,683	157,872	—
618	Ala.	Alabama Power Company	144,000	13,047,510	9,516,933	3,530,577	—

619	Calif.	Pacific Gas and Electric Company	67,000	10,009,855	9,009,842	1,000,013	—
621	Idaho	The Washington Water Power Company	10,880	3,743,288	3,320,825	422,463	—
628	Calif.	Pacific Gas and Electric Company	68,000	11,067,056	9,634,327	1,432,729	—

619	Calif.	Pacific Gas and Electric Company	67,000	10,009,855	9,009,842	1,000,013	—
621	Idaho	The Washington Water Power Company	10,880	3,743,288	3,320,825	422,463	—
637	Wash.	The Washington Water Power Company	68,000	11,067,056	9,634,327	1,432,729	—
665	Utah	Utah Power & Light Company	1,250	194,534	150,572	43,962	—
671	Utah	Utah Power & Light Company	2,620	254,008	197,191	56,817	—
675	Utah	Utah Power & Light Company	3,500	343,329	250,588	92,741	—
682	Fla.	Florida Power Corporation	13,000	3,082,754	2,621,043	461,711	—
696	Utah	Utah Power & Light Company	3,150	449,396	339,701	109,695	—
703	Idaho	Utah Power & Light Company	900	109,053	81,938	27,115	—
710	Wisc.	Wisconsin Power & Light Company	900	335,856	329,415	6,441	—
713	Utah	Utah Power & Light Company	2,000	419,815	322,179	97,636	—
747	Calif.	California Oregon Power Company	640	83,394	83,394	—	—
749	Idaho	California-Pacific Utilities Company	270	23,841	23,841	—	—
814	Utah	Telluride Power Company	4,350	542,828	542,828	—	—
935	Wash.	Pacific Power & Light Company	110,000	8,691,204	8,202,982	488,222	—
943	Wash.	Puget Sound Power & Light Company	84,000	15,904,515	14,769,685	1,134,830	—
1025	Pa.	Safe Harbor Water Power Corporation	297,500	25,040,001	24,858,399	181,602	—
1144	Alaska	Knight, Elizabeth Graff	700	157,941	157,941	—	—
1175	W. Va.	Kanawha Valley Power Company	42,900	2,819,848	2,813,620	6,228	—
1218	Ga.	Georgia Power Company	8,250	2,423,500	1,747,100	676,400	—
1290	W. Va.	Kanawha Valley Power Company	27,550	1,920,568	1,903,307	17,261	—
1318	Calif.	Pacific Gas and Electric Company	61,500	8,033,469	6,891,010	1,142,459	—
1333	Calif.	Pacific Gas and Electric Company	7,200	860,352	841,382	18,970	—
1352	Calif.	Pacific Gas and Electric Company	90,000	16,722,199	15,944,855	777,344	—
1354	Calif.	Pacific Gas and Electric Company	39,900	4,654,480	4,498,067	156,413	—
1388	Calif.	California Electric Power Company	14,000	2,705,838	1,418,907	1,286,931	—
1389	Calif.	California Electric Power Company	16,000	1,946,389	1,866,138	80,251	—
1390	Calif.	California Electric Power Company	4,020	735,108	513,443	221,665	—
1394	Calif.	California Electric Power Company	40,670	3,744,982	3,390,505	354,477	—
1447	Ore.	Pacific Power & Light Company	1,470	303,376	296,347	7,029	—
1473	Mont.	The Montana Power Company	1,500	453,167	385,676	67,491	—
1744	Utah	Utah Power & Light Company	3,700	542,139	539,220	2,919	—
1855	Vt.-N. H.-Mass.	New England Power Company	57,571	14,283,166	8,817,622	5,465,544	—
1894	S. C.	South Carolina Electric & Gas Company	21,600	2,563,097	2,706,923	(143,826)	—
1895	S. C.	South Carolina Electric & Gas Company	13,800	1,416,653	1,532,846	(116,193)	—
1903	N. H.	Concord Electric Company	3,175	881,546	789,183	92,363	—
(84)		Total	4,559,775	$587,796,963	$520,690,839	$67,106,124	—
	Municipalities						
88	Calif.	Merced Irrigation District	35,000	$ 11,441,113	$ 11,441,113	—	—
201	Alaska	Town of Petersburg	1,240	116,292	116,292		—
350	Alaska	City of Anchorage	3,000	1,102,574	735,302	$ 367,272	—
408	Alaska	City of Sitka	600	23,006	23,006	—	—
420	Alaska	City of Ketchikan	5,800	475,983	475,983	—	—
553	Wash.	City of Seattle	166,000	20,129,833	19,302,726	827,107	—
659	Ga.	Crisp County	9,000	1,345,925	1,345,925	—	—
663	Puerto Rico	Puerto Rico Water Resources Authority	7,000	1,245,358	1,224,329	21,029	—
693	N. C.	Town of Highlands	300	96,342	96,342	—	—
785	Mich.	City of Allegan	3,350	543,930	503,785	40,145	—
925	Iowa	City of Ottumwa	4,200	485.057	485,057	—	—
946	Utah	City of Hyrum	600	87,017	87,017	—	—
1235	Va.	City of Radford	1,140	195,754	199,174	(3,420)	—
1273	Utah	Parowan City Corporation	496	51,422	51,422	—	—
1510	Wisc.	City of Kaukauna	6,600	546,478	546,478	—	—
(15)		Total	244,326	$ 37,886,084	$ 36,633,951	$ 1,252,133	—

Project No.	Location	Licensee	Present Installed Capacity (Hp.)	Claimed Cost	Disposition: Allowed	Disposition: Disallowed	Under Consideration
Industrials							
13	N. Y.	Henry Ford & Sons, Inc.	8,100	$ 1,762,387	$ 1,762,387	—	—
362	Minn.	Ford Motor Company	19,200	1,463,664	1,464,336	$ (672)	—
588	Wash.	Crown Zellerbach Corporation	17,500	2,228,624	1,970,327	258,297	—
719	Wash.	Jesse I. Smith	440	118,692	118,692	—	—
738	Ohio	Morgan County Farm Bureau Co-op. Assn.	123	9,116	9,116	—	—
951	Alaska	Chichagoff Mining Company	1,180	105,096	105,096	—	—
1097	Ore.	John A. Zehntbauer	115	25,498	25,498	—	—
(7)		Total	46,658	$ 5,713,077	$ 5,455,452	$ 257,625	—
106		Total I—Cases Settled	4,850,759	$631,396,124	$562,780,242	$68,615,882	$ —

LICENSED PROJECT INITIAL COST DETERMINATIONS

Additions to Settled Cases during Period July 1, 1950, to June 30, 1951

			Capacity	Claimed	Allowed	Disallowed	Under Consideration
Privately Owned							
485	Ga.	Georgia Power Company	66,000	$ 7,688,544	$ 7,045,600	$ 642,944	—
Municipalities							
1256	Neb.	Loup River Public Power District	63,600	8,138,920	7,795,210	343,710	—
1417	Neb.	The Central Nebraska Public Power and Irrigation District	78,000	18,311,124	17,293,780	1,017,344	—
1490	Texas	Brazos River Conservation and Reclamation District	31,500	4,176,629	4,065,357	111,272	—
1835	Neb.	Platte Valley Public Power and Irrigation District	36,000	9,386,393	8,288,697	1,097,696	—
1862	Wash.	City of Tacoma	156,000	25,657,420	24,296,992	1,360,428	—

Revised Totals—June 30, 1951

No. Projects		Capacity	Claimed	Allowed	Disallowed	Under Consideration
85	Privately owned	4,494,615	$595,485,507	$527,736,439	67,749,068	—
20	Municipalities	609,426	103,556,570	98,373,987	5,182,583	—
7	Industrials	46,658	5,713,077	5,455,452	257,625	—
112		5,150,699	$704,755,154	$631,565,878	$73,189,276	$ —

WHAT WILL "RECAPTURE" MEAN FOR FPC HYDRO LICENSEES?

THE 1951 FPC Annual Report will note the continued expansion of electric co-operatives. Among the preliminary permits and licenses sought are three from North Carolina, the largest for an 88,500-horsepower project on the South Fork of New river and Middle Fork of Reddies river. State of Washington PUD's applied for two licenses, the larger for 75,000 horsepower. Two other preliminary permits were issued to Washington PUD's, one for 80,000, the other 85,000 estimated horsepower.

A New Hampshire co-operative obtained a preliminary permit for a 12,000-horsepower project. Biggest of all was a preliminary permit issued to Lyles Ford Tri-County Power Authority in South Carolina for a 350,000-horsepower project on the Broad and Congaree rivers.

Breaking down the figures from another angle, applications for major licenses for new hydro capacity under private development aggregated 1,536,050 kilowatts. Similar applications for licenses under public development aggregate 668,700 kilowatts, including projects of Placer county, California, for 346,700 kilowatts of new capacity. The over-all total is 2,047,002 kilowatts.

Among important licensed projects now under construction are the following:

Company	*State*	*Horsepower*
Georgia Power	Georgia	61,000
Niagara Mohawk	New York	40,000
Idaho Power	Idaho	114,000
Washington Water Power	Idaho-Montana	282,000
Pacific Power & Light	Washington	280,000

It is of interest also to note that during the year twelve applications were filed for *new licenses* to succeed licenses previously issued which had expired or were about to expire. Presumably licenses for "minor" projects made up the majority of these applications.

FPC collects more than a million dollars annually (for fiscal 1951, $1,205,555.47) from licensees. The basis is one cent per horsepower of installed capacity plus two and one-half cents per thousand kilowatt hours of gross energy produced during the calendar year. There are also minor charges for land use.

BEFORE Noah and now, the status of the human race is conditioned by the manner of use and control of falling water. The facts are so trite we forget them—until floods occur or the wells go dry. Dead cities of the Near East, man's precarious existence today in India and China, are useful reminders.

The effective use and control of our water resources require the same quantity and kind of careful planning as are necessary to preserve freedom and a truly democratic government here in these United States. The states (but by no means all the voters) have become aware that the taxing power of the Federal government should be effectively limited.

The Federal Water Power Act, added a generation ago to the ever-swelling bulk of public laws, is entitled to be more familiarly known and understood. It is the purpose of this article to arouse and stimulate a greater interest in the very real potentialities of this law.

Utility Occupational Superstitions

Every line of business has its pet superstitions, even the utilities. Some are mere sentimental poses, perhaps. Here is a collection from the utility field which will be found full of interesting as well as entertaining industry lore.

By HENRY F. UNGER*

No amount of persuasion or intimidation will bring a certain railroad car inspector to work on February 15th of each year. Religiously he leaves his job with the remark, "See you in a couple of days." He has no "in" with the boss and he isn't necessarily ill. But no one will question his self-imposed vacation. For he's got a superstition and he has it as bad as numerous other railroad men, as well as public utility employees.

Several years ago, the car inspector was knocked down on a February 15th while checking cars. Rushed to a hospital, it was nip and tuck with death for several days. Recovered, the inspector was sure that the date was the influencing factor. He would never give it another chance. And so he remains home in bed on that fateful day.

Crazy you'll say. But this apparently silly railroad man and other public utility employees, often pillars of their communities, are merely innocent victims of their superstitious natures. These pet quirks run the gamut in practically all the utilities.

An engineer in a big St. Louis water plant reports to work with a fuzzy rabbit's foot nestling in his coat pocket. When he reaches his work locale, he removes the foot and places it in a safe spot and then proceeds to work, relieved that no danger will overcome him for the day. Convinced that only good luck will follow him, the engineer will not part with the rabbit's foot. In jest, he had been given the foot one day by a fellow worker and accidentally placed it into his pocket.

*For personal note, see "Pages with the Editors."

He narrowly missed becoming involved in a serious accident. He owed the escape to the rabbit's foot and has never forgotten it.

At a large western dam, a construction engineer clambering over high construction jobs never fails to wear a jockey-type hat to work. One day his associates removed the hat from his head and hid the well-worn item. The New York expert went into a tizzy. It seems that the engineer was an ex-GI, who wore the hat during many air raids over Germany. He escaped unscathed. He feels that if the hat protected him then, it should do the same job now. He even wears the hat home from work.

In Cleveland, an engineer reports for work with a pair of baby's shoes. Like the rabbit's foot addict, he places them near his work area. To the first onlooker, the engineer seems to be off his noggin. Actually the Cleveland engineer insists that these shoes of his first baby brought him luck. He has always managed to have a job whenever he carried the shoes with him and he has likewise pushed his first daughter through college without too much difficulty.

Pet superstitions have arisen among many truckers, their seriousness varying with the trucker's personality. Spotting red-haired women before starting out on a run is for some truckers the pronouncing of a death sentence. One Detroit knight of the road is so convinced of the bad luck omen of a red-haired woman that he will jam on his brakes, leap from his cab, inhale deeply, and walk once around the many-wheeled job. He insists that this breaks the spell. Another trucker has his own version of a spell breaker when red-haired women are concerned. He expectorates into his cap when he spots a titian-haired female. To many truckers finding a worm on workday clothes, while seated in the truck cab, means a new suit of clothes. To others, singing before breakfast means tears before nightfall. Truckers exposed to winter driving often believe that consuming many onions eliminates the catching of colds. A good laugh for the nonsuperstitious but for the superstitious driver, bad luck will accompany the driver who puts on his trousers first. "Put your shirt on first and you'll have good luck for the day," he says.

There is no living with a Massachusetts telephone lineman unless he carries a small framed picture of his wife to work. It all started a couple of years ago when the lineman was hard at work preparatory to climbing a pole. He had a small framed picture of his wife in his pocket which he was to drop off at a friend's house. She had asked for a picture. Suddenly a gunman emerged from a near-by store. An eruption of gun play swirled for a few moments. Hardly knowing what had happened, the lineman was jarred backward. He had been hit by a stray bullet. Fortunately the bullet glanced off the metal picture frame. The lineman's life was saved. Consequently came the superstition. To the lineman it was no coincidence.

There is a Boston gas meter reader who won't report to work without carrying a good-luck coin or 13 cents in change in his pocket. Religiously he checks on them. He points to all his years on the job without injury; all

due, he says, to his coins. No amount of talking will dispel this rock-bottom superstitious practice, even though he does not like to call his practice superstition.

A Washington, D. C., gas meter reader has been charged by so many dogs which he thought were the quiet type in the home, that he never enters a home unless two fingers are crossed. He keeps them crossed until he leaves the home safe and sound.

Several Ohio public utility electricians draw a 4-leaf clover near the objects on which they will work. A long and successful term of service is guaranteed, they feel, with this drawing and with the good-luck 4-leaf clover.

WITH the majority of superstitious believers, only bad luck will follow if certain actions are not pursued. Public utility employees are no different. Friday the thirteenth is not a day made for work, and consequently many remain at home. They, of course, do not heed the words of the men who worked throughout that day without harm.

An engineer for a big gas utility has a dread of the number 13. He won't take a job in which the number 13 figures nor will he go to an address with 13 in it. Often he has been forced to enter such a place and under threat of loss of his job he feels that walking three times around the shop or address he will be immune from any bad luck. At least he feels that he keeps these attempts at a minimum and doesn't irritate good luck.

Many railroad engineers shake their heads in horror when they must begin a new time schedule on a Friday. And don't expect many of them to turn out a new engine from the shop on a Friday. That would be a catastrophe and bring nothing but bad luck. Working on Friday the thirteenth for railroad engineers—at least many of them—would bring on nothing but a serious smashup.

Superstition ran a sad gamut for one veteran railroad man one day. Without warning the man exploded several hard punches into the boss hostler, driving him into the turntable pit because he refused to allow the wipers to turn his engine "with the sun." The superstitious man was always present when the engine was turned and he insisted that it be turned in the same direction each time. Even after a hard run he would sit for hours to see that this was done. Determined to test the man one day, the engine was turned the other way. Result was a smashed jaw for the schemer.

Brought to trial, the man explained

¶ "PET *superstitions have arisen among many truckers, their seriousness varying with the trucker's personality. Spotting red-haired women before starting out on a run is for some truckers the pronouncing of a death sentence. One Detroit knight of the road is so convinced of the bad-luck omen of a red-haired woman that he will jam on his brakes, leap from his cab, inhale deeply, and walk once around the many-wheeled job. He insists that this breaks the spell.*"

that his father and two brothers had turned "agin' the sun" and both were killed in accidents.

POPULAR is the belief that a descent from the cab of a locomotive by engineer and fireman must always be on one side. Otherwise, bad luck will dog their footsteps. Many, when about to oil, never get down on their own side. And it is a miserable trip should the man drop his oil can when descending the steps. This is similar to a jockey losing his whip before a race. Deep furrows form on certain engineers' brows when this happens. They literally hold their breath during the run. Certain disaster is expected.

An electrical lineman in Baltimore is deathly afraid of meeting black cats on his way to work. One day, and this he tells on himself, he suddenly crossed a street. A black cat strolled in front of him. The lineman was so shaken that he had to sit down for some time to relax.

With Fridays, black cats, and all sorts of other bugaboos designated as ominous signs for railroad men, it is surprising how number 13, apart from Friday the thirteenth, has evaded them. Rather, the men of the tracks abhor number 9 and its multiple.

That number 9 took on a sinister note can be blamed on a train race years ago. An engine No. 9 was doing well until a new division was opened on a certain railroad. The west-bound train started at the same time with the competitor's flier, but the running time was considerably shortened over the new division which ran parallel with the rival road.

No. 9 had been overhauled. The meeting place, a long, straight stretch of track, for the west-bound and fast east-bound trains, was visible for a couple of miles. The time had been so arranged that the east-bound train would get to the siding a few minutes before the other train, so as not to delay her. But this didn't give the west-bound the right to pass that siding if the opposing train had not arrived, without orders from the dispatcher.

UNFORTUNATELY, the east-bound had been delayed by a hot box on a car and the engineer went by the red flag at the telegraph office, set up to stop him. He passed the vacant siding and collided with No. 36 in a deep cut. The engine crews were killed. Engine No. 9 took on the garb of a hoodoo. The engine seemed constantly to be in trouble. Crews shied away from her. They took suspensions rather than go on her. She would run away when left alone. On one occasion, she was barely saved from running into a night express. Later, the ill-fated engine left the track while at top speed and plunged 60 feet into a river, drowning the crew. And this happened at a curve on a main line where nothing ever had happened.

Despite the fear of the crews to ride her, they treasured highly prize watch chains which came from the scrap of No. 9's bell after her collision with No. 36.

High up on the list of railroad superstitions is the feeling that accidents happen in threes. Crews are often nervous as they go to work on an engine which has suffered her first accident.

Frisk some lineman crews as they report for work and you'll find a long list of hilarious charms against ill-

Taboos and Bugaboos in the Utility Plant

"WITH the majority of superstitious believers, only bad luck will follow if certain actions are not followed. Public utility employees are no different. Friday the thirteenth is not a day made for work, and consequently many remain at home. They, of course, do not heed the words of the men who worked throughout that day without harm."

luck. One ex-GI, returned from the battle fronts, carries a small wad of bills close to his body. That same batch of bills had saved him from death by a Nazi sniper bullet. He had been paid and was carrying the bills into battle. They helped to ricochet the bullet.

Convinced that his happy married life and accidentless trips on Baltimore busses were due to the first letter received from his wife, one bus driver in that city neatly folds it in a money belt encircling his body. Several streetcar motormen around the country admit that they will plead sick rather than chance a trip on the day following a dream about an accident.

TRUCK drivers often complain loud and long about license plates containing the number 13—in spite of the fact that some of the best drivers in the business drive trucks with license plates bearing those quasi unlucky numbers. Many drivers have their own lucky number, and should it appear on their license plate they want everybody to know that good luck is now assured them.

By watching a certain New York city truck driver on a Friday you would feel that lunacy had set in. He goes through a ritual of removing his shoes before a run on a Friday, switching them several times. He then puts them on, ready and prepared for a safe trip.

A driver for a certain gang of Rhode Island telephone linemen never fails to stop at one restaurant and only for a cup of coffee. He rarely buys anything else in the place. The main purpose is superstition. He had as a lark stopped at the restaurant one

afternoon sometime ago. A few minutes later while he was drinking coffee, a terrific accident involving another truck driver and a careless motorist occurred near the restaurant. The driver for the crew has convinced himself that only this stop prevented him from becoming involved in this accident, and so he continues to stop there for good luck.

GETTING the "bends" in the construction of tunnels was always good for a solid superstition. Workers were convinced that the "mystic force" of electricity could be dealt a helping hand through various experiments. The bends would then go out the nearest exit. Connecting the bends with electricity, the caisson workers rigged up bands composed of zinc and silver on their wrists, ankles, and around their waists.

These metals, when in contact with each other and with moisture, generate a mild electric current. This, the caisson engineers were certain, eliminated the bends. However, scientific deductions showed that the whole bend theory of the caisson workers didn't work. Bends came from the too rapid change of atmospheric pressure.

Caisson engineers and workers glance rather sadly at each other in the tunnels when they see a woman enter this underground caisson sanctum sanctorum—particularly if it is far from quitting time. Only death to one of the men will result because of the woman's visit. Since deaths have occurred after a woman's visit, the superstition has taken effect with the engineers and workers.

One dam rigger eats ice cream in great quantities on every Friday the thirteenth. His crew narrowly escaped injury on one occasion during a collapse of some platforms. He was eating ice cream at the time and it was Friday the thirteenth. Try as you might, you can't shake this man from his pet quirk, which he prefers to call a good luck omen.

Then there's a public utility dam construction worker who follows a more reasonable superstition. He always reports to work on big projects wearing a good derby hat, winter or summer. A bolt once glanced off his derby-covered head. To him that was a lucky break. He is faithful to his derby now, despite the snickers of others.

GRANTED that it takes nerve to walk a long narrow flange of a beam high in the air, hook legs around the steel, and lean out to drive home a drift pin. But in many areas, engineers and their aides won't stay on the job for love of money, at least for the rest of the day, once a fellow worker falls and is killed or is even injured.

During the course of the erection of a large dam, a white pigeon circled around the project and alighted near the top of the structure. Consternation gripped the engineers and workers. Immediately, many of the men voted to retire from the job that day, while others laughed and scoffed at the superstitious ideas of the men. It may have been a coincidence but in a few minutes one of the workers slipped from the span and fell to his death. Even though the contractor was working against the penalty for an overdue contract, the men walked off the job for the remainder of the day.

Some linemen in the public utility

field use lucky coins. A Boston telephone lineman when checking his timepiece, will toss it into the air, rub it three times against his trouser leg, and then put it away. To miss the toss would be tragic.

The breaking of any important equipment before the day's work is hardly begun could mean a tough day for many linemen. One fellow in a Detroit plant scoffed at the owner's superstition after some valuable equipment had been smashed. Hardly an hour later, the newcomer lineman slipped and sprained his wrist, returned home to find his wife had contracted the flu. He treated the equipment gently later, even though coincidence was still on his side.

To many of the public utility employees, celery is a brain food, helps their mental agility, asparagus flushes out the kidneys, and onions keep off the approach of colds. To the nonsuperstitious lot, the onion eaters keep everybody away.

Visitors to a certain technician's home will be surprised to find liverwurst on the menu—in addition to other food, of course—if they visit on the fourteenth of the month. The technician had worked hard to land a promotion but the chances for the hike in position looked bad. The technician happened to be eating some liverwurst when suddenly he received a call from the front office. His advance in rank was the next move. The technician leaped for joy at the promotion and then he remembered the liverwurst. He was convinced that his eating of the seasoned food had opened the way for the promotion. He always eats it on the day of his big promotion.

One old-timer railroad man, eager to build his own train before retiring from the field, pleaded for permission to complete this task and lifelong ambition. His engine finished, the engineer called the president of the railroad to witness the maiden run. Surrounded by several dignitaries and other curious higher-ups, it suddenly occurred to the old-timer that the christening was occurring on a Friday. Without the slightest hesitation, he jumped up on the engine and with firm words, explained, "Sorry boys, you'd better all go home. It's Friday and we don't run today."

In practically every branch of the utility industry, some man in the field has a peculiar quirk. To him it means much. To others it might bring a laugh if they detect it. But incidentally, what is your superstition?

"A PERFECT *democracy would be a society in which all, or the great majority of, citizens were alert, responsible, and well-informed. It is doubtful whether this condition has been realized, in the United States or in any other country. Our knowledge has been multiplied; but there is little proof that our wisdom is greater than that of our forefathers. Our technology has achieved wonders; but our moral progress has lagged far behind science and invention.*"

—WILLIAM HENRY CHAMBERLIN,
Columnist.

Washington and the Utilities

Test Cases Coming Up

THE still New Year of 1952 promises to be a busy one for the lawyers engaged in leading controversial test cases on the Federal regulation of utilities. While the Interior Department was still making a last-minute decision on whether to appeal the Roanoke Rapids Case to the U. S. Supreme Court, the Federal Power Commission finally hatched out the long-awaited parallel test case—the so-called Kings River Case.

In a unanimous decision (four members) handed down on December 21st, the commission approved the granting of a hydroelectric license to the Pacific Gas and Electric Company despite the objection by Secretary of Interior Chapman (who made an unusual personal appearance) that it would interfere with the Reclamation Bureau's plan for developing irrigation in the Central valley of California.

When the Interior Department was unable to produce additional evidence on rehearing, the FPC affirmed its original decision in favor of the private company's license.

If there is any material difference between the Roanoke Rapids Case and the Kings River Case, it lies in the fact that the Interior Department's position is perhaps a little weaker in the former case. There, the Fourth U. S. Circuit Court of Appeals (unanimously upholding the FPC order granting a license to the Virginia Electric & Power Company) found that the Interior Department was simply the power-marketing agent for the Army, in contesting the proposed development by the Virginia utility. In the Kings River Case the Interior Department, on behalf of the Reclamation Bureau, objected in its own right to the rival private company development.

BUT this slight difference between the two cases scarcely goes to the merits of the fundamental issue upon which they will be finally decided. That is whether Congress vested paramount authority over the issuance of hydroelectric licenses in the Federal Power Commission or intended that the FPC should be subject to the various programs for public power development approved by the Secretary of the Interior.

Within the next few weeks, assuming that the Secretary of the Interior is going to play all his cards by seeking a further appeal in the Roanoke Rapids Case, we shall know whether the U. S. Supreme Court will agree to review the lower court's decision. Meanwhile, it is generally expected that Interior lawyers will carry on the department's apparent policy of last-ditch litigation on these test cases, by appealing the Kings River Case to the Ninth U. S. Circuit Court of Appeals.

In a somewhat different category, another test case—on which a petition for Supreme Court review was filed just a few days before the FPC decided the Kings River Case—is the Idaho Power Company Case. In this case, the Interior Department is not even a party but a very interested spectator, to say the least.

The Idaho Case involves the right of the FPC to impose certain common carrier conditions on a power company seeking to build a transmission line. This case goes back to the days before the rivalry between Interior and the Federal Power Commission had reached an open break in the Roanoke Case. At that time FPC seemed to be trying to appease the Interior Department's claims to dictate the

government's power policy. One of these claims was Interior's insistence that the Idaho Power Company be required to transmit government power over its lines as a condition to receiving the permit.

So, really, it was Interior's "conditions" which the FPC sought to impose on the Idaho Power Company and the company refused to accept such a license. The company was sustained by the U. S. Circuit Court of Appeals. Now FPC lawyers find themselves in the odd position of taking up an appeal and arguing for conditions which the Interior Department sought to impose. There has been some speculation that if the FPC should happen to lose this one (and it has lost surprisingly few court appeals), its lawyers will bear up with remarkable fortitude.

Gas Line Test Cases

ALTHOUGH they involve entirely different Federal statutes, there is a basic analogy between the Idaho Case, mentioned above, and a very interesting series of test cases dealing with the construction of interstate natural gas pipelines over government lands. In the Idaho Case the issue is whether the Federal Power Act gives the FPC any right to impose an obligation to carry government power on the applicant for a permit to construct a transmission line across public lands. The FPC says it does. The company says it does not. The Interior, as already stated, does not appear in the litigation as a party.

But in the El Paso pipeline case it was Interior which took the leading rôle of requiring the El Paso Natural Gas Company to agree to become a common carrier of gas as a condition to building a pipeline across government lands. The Interior Department claimed that it had a right to impose such a condition. The company said it did not. The FPC was not a party to the case, which terminated in the District of Columbia Court of Appeals with an injunction requiring the Secretary of Interior to grant the certificate without the burdensome conditions.

Unfortunately, from the standpoint of clarification, this older El Paso Case was not clean-cut. It was complicated by an original agreement on the part of Interior to allow the line to be built without any common carrier conditions. The argument in court turned not so much on fundamental statutory authority as on the question of whether the Secretary of Interior was trying to renege on his own deal. That gave the Interior Department the opportunity, which was promptly seized, to declare that the El Paso Case was a sort of freak or misunderstanding, or, as the lawyers say, *sui generis*.

IGNORING any significance in its El Paso contratemps, the Interior Department promptly followed up the court order with a blanket announcement of general policy on all future gas line permits. This announcement, made last summer, was predicated on the Mineral Leasing Act of 1920, under which the Secretary of Interior claims the authority and the duty to impose a common carrier status on all natural gas lines crossing government lands.

But the Mineral Leasing Act also provides an alternative to the common carrier status which the Secretary has so far pointedly ignored. That is a provision permitting the pipeline licensee to *purchase* proffered gas in lieu of transporting it for a fee. The Interior Department policy statement of last August says nothing about this.

The opinion also exists among some able attorneys specializing in gas regulation that some of these Interior powers, under the old Mineral Leasing Act, were impliedly repealed by Congress when it passed the Natural Gas Act in 1938. In other words, they take the position that Congress intended to give the Federal Power Commission the sole authority to issue permits to interstate pipeline companies and to agree upon what conditions the pipeline shall be built and operated under the terms of the Natural Gas Act.

It now looks as if that phase of the gas industry's effort to stay clear of the

common carrier responsibility imposed by the Interior Department may be given a trial run, in a case arising in Montana. It is understood that the Montana-Dakota Utilities Company has gone into the U. S. District Court for an order requiring the Secretary of Interior to issue a simple permit for the construction of a pipeline for its use by the Montana-Wyoming Pipeline Company. It has refused to accept the common carrier conditions which the Interior Department sought to impose.

EVEN in this case, however, there are complications which may make it unsatisfactory as a clean-cut test of the basic issue. Just as in the El Paso Case, Interior apparently originally agreed to the construction of the line without any afterthoughts about common carrier obligations. In fact, the Interior Department indicated that building the line was a fine thing, making good use of flare gas which hitherto had been wasted.

As a matter of fact, the line has already been built and is now in the ground. So the Federal court, as well as the utility company, may take the easiest solution of following the El Paso precedent and calling Interior's subsequent conditions simply a misdeal.

But sooner or later the issue will have to be met head-on. It is reported that another case involving an entirely different project of the same El Paso Company is now in the works. And this, it would appear, will be a pretty clean-cut proposition. Although this department's information is entirely unofficial, rumors are that Interior has refused the permit and the company is now in the process of exhausting its remedies as a prelude to possible court action. As to that, we shall just have to wait and see.

But adding these half-dozen cases together, three for power and three for gas, it looks like a pretty busy New Year for lawyers, government and private.

OPS Rate Case Activity

THE next session of Congress is not expected to make very many changes in the Defense Production Act which controls the operation of the emergency control agencies. There are about four major amendments, none of interest to utilities, which are hanging over from the last session. But while Congress is expected to do a lot of debating, pro and con, there is a certain degree of tacit agreement between the Democrats and the Republicans that a wholesale revision of the Defense Production Act would be opening Pandora's box during an election year. The Republicans already think they have enough issues without clouding the atmosphere, while the Democrats would rather avoid any subject likely to drag in an international policy issue.

Against this general background, it is not very likely that the administration will even repeat its demand of last year that the OPS be given more latitude in utility rate cases. It will be recalled that the House of Representatives actually passed the Kennedy amendment that would let OPS get into any kind of a utility rate case. (The present law confines OPS to notice and intervention in rate cases involving wholesale utility service only.) The Senate killed the Kennedy amendment in conference.

BUT aside from any definite amendment, some members of Congress may be disposed to question the activity of OPS—perhaps in the course of committee hearings on appropriations for the coming fiscal year. During the past few weeks, Senator Maybank (Democrat, South Carolina), chairman of the congressional "watchdog" committee, tried several times, without success, to get a satisfactory explanation of OPS rate case activity.

The legal division of OPS has now been reported to have decided that there *is* authority for OPS to get into rate cases, other than those involving wholesale service. Conceding that the Defense Production Act sets up such limitations, the legal division experts refer to the over-all tenor of the executive order of the President, directing the OPS to stabilize the nation's economy and check inflation whenever and however possible.

Exchange Calls And Gossip

1951 Review

HIGHLIGHTING the communication news of the past year, regulation-wise, that is, was the decision of the Federal Communications Commission to retreat from its early year campaign to reduce long-distance telephone rates. The move came after a year of postponements of the hearings, conferences with Bell and state commission officials, and congressional criticisms.

Spearheading the congressional attacks and supporting the state commissions' position that FCC allocation of telephone company investment expenses and revenues were unfairly weighted against intrastate rate structures, was Senate Majority Leader McFarland, Democrat of Arizona. Senator McFarland has long been an FCC critic and for some time now has been attempting to revamp the commission organization structure with legislation amending the Federal Communications Act.

As a result of the general opposition, a surprise compromise of the dispute was announced by Commissioner Walker when he addressed the October convention of the National Association of Railroad and Utilities Commissioners in Charleston, South Carolina. He reported that the FCC had agreed to revise its separations formula and allow substantial amounts of the intrastate investments and expenses to be assigned to the Long Lines operations of the Bell system. Between this compromise and interim wage increases granted by Bell in its Long Lines Department, the alleged high return appeared to shrink to a reasonable return. Shortly after Walker's announcement FCC formalized the action with an order which indefinitely postponed the show-cause hearing, which had been first ordered last January.

Communication Material Outlook

COPPER, the number one necessity of the telephone industry, has become the most scarce of all the defense materials. The prospects for an adequate supply for the industry during the coming year are indeed most discouraging. Defense officials appear to have both the steel and the aluminum supply problem solved, but openly take a pessimistic view of any near-by solution to the copper problem. The Office of Price Stabilization has complicated the picture by refusing to allow the high prices which the Chilean copper demands on the world market, and as a result the Chilean supply is going to other parts of the world.

It is definitely a situation of things getting worse before they are going to get better. Here on the home market the government has moved to put into operation marginal copper mines which have been uneconomic to operate in the past. The plan calls for a subsidy payment by the government to the producers to allow them to sell the copper at ceiling prices. Even this plan will not bear fruit for some time to come.

Grim as the situation is, communication equipment officials of NPA feel that there will be no immediate need for a telephone service limitation order such as was issued during World War II. This type of order is currently considered rather unmanageable and it is believed that the acute material shortages being

experienced by the companies will more or less automatically take care of service curtailments.

Still another complicating factor is the unknown quantity of military demands which vary from quarter to quarter. This, incidentally, seems to be the universal complaint of most of the utility defense agencies when queried on the possibility of a target date, at which time the material situation will ease. They take the position that until such time as the military can be pinned down to a reasonably accurate estimate of just what they will need, there is no possibility of predicting what can be done about the shortages.

In addition to the general complaint about material shortages in the telephone industry, there is a companion complaint about the unnecessary paper work demanded of the companies in obtaining the material. Representations have been made to the top level of the National Production Authority that the special NPA Order M-77, under which materials for telephone companies are controlled, should be liberalized. Main effort will be made to extend present provision for "self-certifying" NPA allotment for ratings (on orders for controlled materials) with special permission from NPA in each case. Small telephone companies already are permitted to do this for material costing up to $15,000 per order. NPA Communications Equipment Division would like to have the privilege extended to all telephone companies without exception. It is pointed out that such self-certification by large companies would be safe from abuse, because of the small amount of materials allowed under the dollar limit. So far, the communication companies are members of the only utility industry in which self-certification without allotment is permitted at all.

Telephone Labor Relations For 1952

The coming year should disclose the answer to the perplexing question of just how far this country can go along the road to disastrous inflation. And the telephone industry's labor negotiations promised to be an important sounding board. Following close on the heels of some settlement of the steel wage question will be negotiations on a number of telephone labor contracts which will come due successively from early spring on into the summer. The Communications Workers of America, headed by Joseph Beirne, are expected to be making some firm demands on the industry if Beirne's CIO convention remarks are any criterion.

It was Beirne, a labor representative on the Wage Stabilization Board, who took the rostrum at the recent CIO convention and urged the members to go back home and make labor demands just as if there was no Wage Stabilization Board. Recently, this same board moved to consolidate telephone wage information in the Washington office, a move interpreted by some as a possible step in the direction of national bargaining for the telephone industry, long a dream of the CWA.

REA Telephone Program

The past year may well be called the "shakedown year" as far as the rural electrification telephone loan program is concerned. True, the program has been going along for some time, but at the beginning of the year, with the program just beginning to hit an even stride, the defense mobilization program intervened to bring it to almost an absolute stop. As a result, the accomplishments of the year can be measured not in the number of loans made, but rather in a series of policy improvements for the program as a whole.

REA will shortly issue a question and answer booklet covering its loan contract and some of the criticisms that have been aimed at the document. These criticisms have been taken as constructive and there appears to be a realization on the part of REA officials that consideration should be given to the suggestions from the "old hands" of the telephone business if the program is to prosper.

Financial News and Comment

By OWEN ELY

Factors and Formulas in Valuing Utility Stocks

THE new third edition of the well-known textbook, *Security Analysis,* by Benjamin Graham and David L. Dodd (both of the Columbia University faculty), contains four chapters on the valuation of public utility common stocks by Charles Tatham, vice president of Institutional Utility Service, Inc. Chapters 20-21 describe factors in public utility analysis and Chapters 39-40 are on the valuation of utility equities. These chapters should be of great interest not only to college students and Wall Street analysts but also to utility executives, due to their thorough, scientific analysis, and because of their probable influence on the views of Wall Street analysts and investment advisers.

In describing the factors in the analysis of utility accounts, the book stresses the factor of regulation, which has a direct bearing on earnings in several ways. The analyst must know not only the legal background of regulation in the different states, but also the current political complexion and policies of the more important state commissions. He must know whether the company's rate base is determined by fair value, original cost, or reproduction cost, and he must learn what percentage return is considered "allowable" by each commission—how much this may vary from the standard 6 per cent figure.

The accounting regulations prescribed by the NARUC, FPC, FCC, etc., are of considerable aid to the analyst, Mr. Tatham points out, since they have placed the accounts on a more uniform and reliable basis. But he does not discuss in detail one very puzzling accounting problem which the analyst must face—the difference between the accounts as prescribed by commission regulation and set up in prospectuses and stockholder reports, and the radically different accounting methods used in reports to the Treasury Department — which differences may have a vital bearing on depreciation and income tax payments, as well as on "normal" earnings.

IN discussing the balance sheet, considerable attention is given to depreciation accounting, and the opinion is expressed that the amortization of plant acquisition adjustments should be treated

DEPARTMENT INDEX

as an operating expense rather than as a deduction from gross income (the FPC practice). In considering the ratio of the depreciation reserve to gross plant account, the book suggests that the analyst should bear in mind that during a period of rapid plant expansion the property account will include large amounts of relatively new plant, and that this may make the depreciation reserve appear too low. (Pennsylvania Power & Light Company is given as an illustration.)

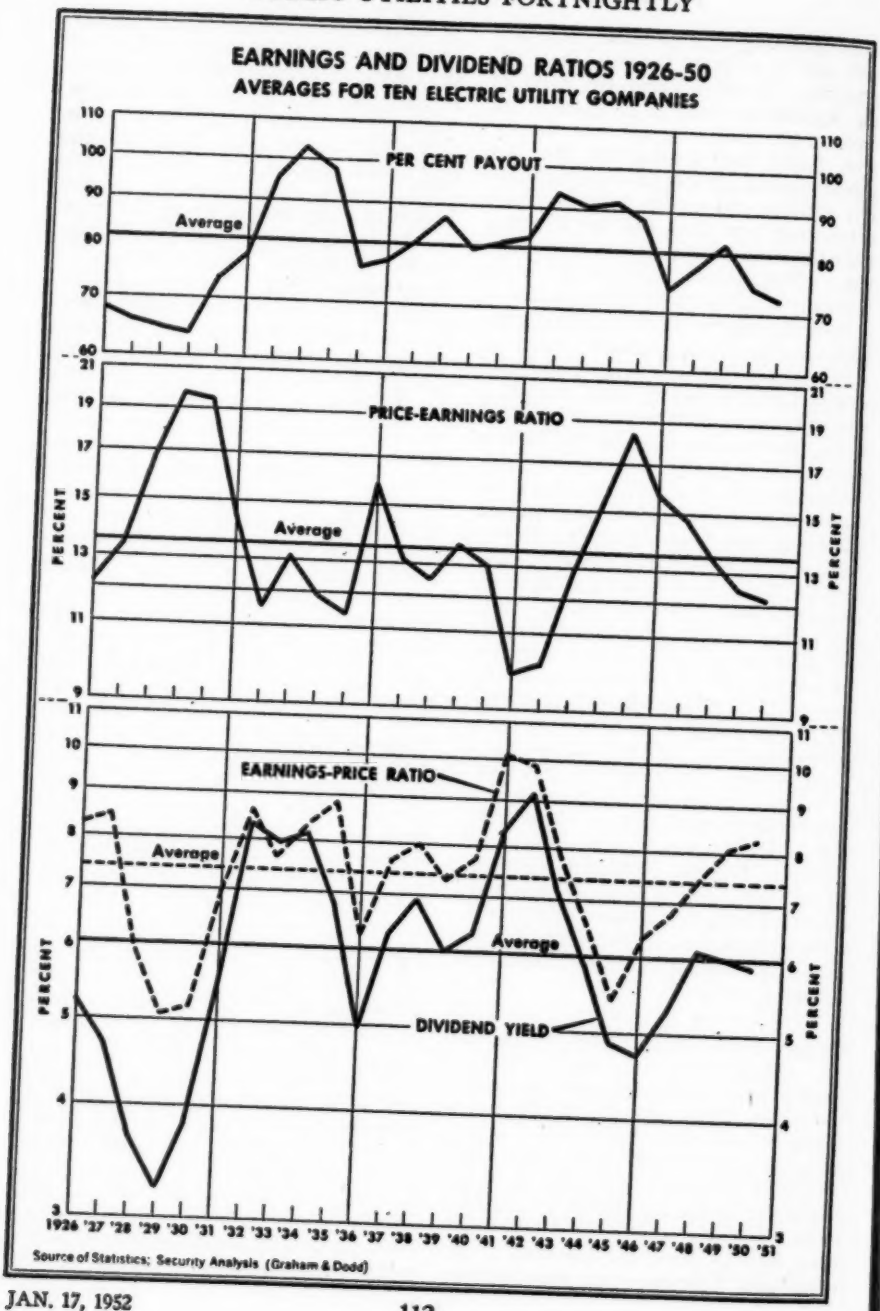
Referring again to rate regulation, the book discusses the techniques used by state commissions with respect to inclusion of working capital in the rate base, using the ratio of net operating income to the rate base as a test of fair return, etc.

The various divisions of a utility company's business — electric, gas, transit, telephone, etc. — may present differing pictures from an earnings and regulatory standpoint: Hence it is important for the analyst to have a departmental breakdown of earnings, gross plant account, and depreciation reserve, and work out the earned rate of return on each segment of the rate base. Such data are seldom made available in prospectuses or stockholders' reports, but are contained in the reports of the Institutional Utility Service (as well as in the statistical reports prepared by the utility companies for insurance companies and others). These divisional earnings figures, plus the analysis of revenues, sales, and rates by divisions and by customer groups, are also helpful to the analyst in attempting to project trends and forecast earnings.

THE analyst is also interested in operating efficiency. While the operating ratio is considered a statistical tool of the rail analyst, Mr. Tatham considers it relatively useless for utility analysis unless both depreciation and Federal income taxes (which have no bearing on operating efficiency) are first excluded from expenses. Allowance must also be made for low-cost hydro operations. Efficiency tests may be made by analyzing and comparing certain percentages and unit cost measures, which are shown as averages for the industry in the table on page 263 of the book. Various ratios used to appraise depreciation and maintenance expenses, and problems connected with amortization of plant acquisition adjustments, charges in lieu of taxes, and other special items are discussed. Mr. Tatham criticizes inclusion of the item "interest charges on construction (credit)" in fixed charges, which distorts the coverage ratios showing "number of times earned" for fixed charges and preferred dividends, as published in financial services. He advocates (as does this department) that the item be treated as an addition to gross income rather than a credit to fixed charges, since it is intended to place operating earnings on a *pro forma* basis with respect to plant not yet in operation.

As a practical illustration of the various tests which the analyst should apply to the income statement in order to adjust share earnings, return on rate base, etc., Pacific Gas and Electric Company is used as an accounting "guinea pig." After a rather drastic readjustment of the 1949 earnings statement (pages 271-3), the conclusion is reached that *pro forma* share earnings would have been $1.31 instead of $2.06. However, after also adjusting for increased rates, etc., *pro forma* earnings are increased to $2.45 a share, and with a fair return on rate base, normal share earning power is estimated around $3.

TURNING to the question of dividend pay-out policy, Mr. Tatham indicates his view that a conservatively capitalized company, with good accounting and adequate reserves and not vulnerable to rate cuts, can reasonably pay out 80-85 per cent of the earnings available for common stock. In the period 1929-48 ten leading individual electric utility companies showed an average balance to surplus of almost 10 per cent of gross income. This would reflect about an 84 per cent dividend pay-out compared with the present figures for all electric


EARNINGS AND DIVIDEND RATIOS 1926-50
AVERAGES FOR TEN ELECTRIC UTILITY COMPANIES
PER CENT PAYOUT
Average
PRICE-EARNINGS RATIO
Average
PERCENT
EARNINGS-PRICE RATIO
Average
Average
DIVIDEND YIELD
PERCENT
1926 '27 '28 '29 '30 '31 '32 '33 '34 '35 '36 '37 '38 '39 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49 '50 '51
Source of Statistics; Security Analysis (Graham & Dodd)

utilities of about 78 per cent (and 71½ per cent in 1950).

In our opinion this formula rests rather too heavily on historical data. Dividend pay-outs for the ten major utilities during 1926-29 averaged only about 65 per cent, and in 1946-49 about 77½ per cent. During intervening periods (particularly in 1932-34, and in less degree during World War II) pay-outs were very high. Wouldn't it be more advisable to base the formula on experience in periods of normal economic conditions, reducing the average pay-out to around 70-76 per cent, and increasing the percentage of gross income to 11-12 per cent? In any event, many smaller utilities, whose balance sheets have been hard hit by plant write-offs and amortization charges, are in process of building up their equity ratios and therefore cannot properly make as high pay-outs as the large old-line companies.

Mr. Tatham supports his case for high dividend pay-outs by Table 132 on page 514, showing the relatively small percentage variation of gross income for *all* electric utilities during 1929-49. But does the historical trend of gross income have great significance, unless it is related to trend of output and revenues? Actually, gross income as a percentage of revenues declined from 48 per cent in 1926 to 25 per cent in 1950. Thus the industry has, by the tests usually applied to other industries, showed almost steadily declining profit margins. The argument that stability warrants high pay-out would thus seem to lose some of its force.

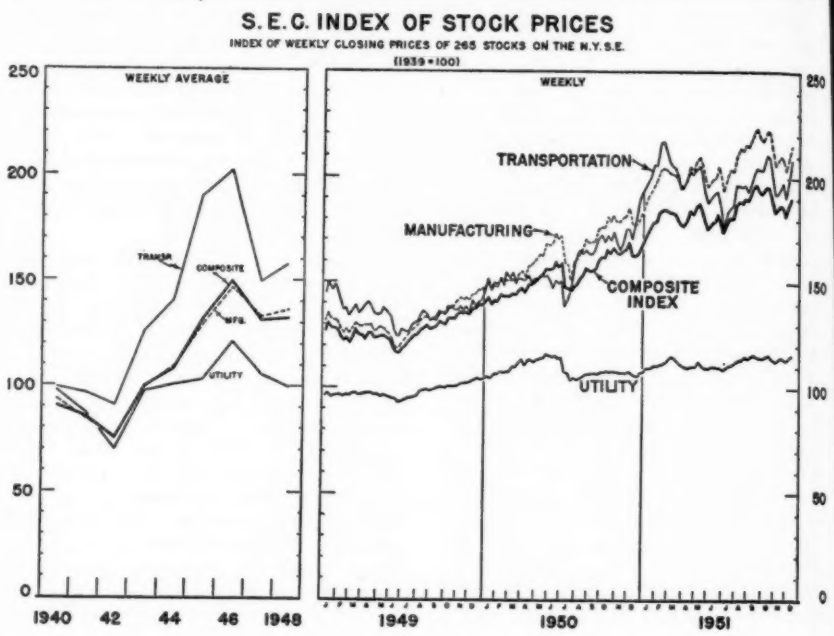
THE element of stability in utility *revenues* has reflected the monopoly factor, combined with steady growth and the indispensable character of residential service (only a portion of large commercial and industrial business being subject to fluctuation from the business cycle). But should the industry lose its monopolistic position with respect to residential business, the position of investors might eventually be somewhat jeopardized, for in that event the protection afforded by regulatory adjustments would prove of less avail. This has been amply demonstrated by the huge losses incurred in the regulated passenger business of railroad and transit companies due to the competition of automobiles. Should scientists discover new ways (via atomic fission or otherwise) of providing residential light and energy, economic complications would ensue for the utilities.

Turning to the chapters covering "Valuation of Public Utility Common Stocks," Mr. Tatham makes the statement that "growth, in the sense of a substantial increase in per share earnings, is not ordinarily a factor to be taken into consideration in the valuation of utility common stocks." This is certainly true enough for the industry as a whole—the benefits of growth and increasing efficiency have been skimmed off by the regulatory commissions. But it hardly applies to all individual companies, or to any company for particular periods of time. Certain companies have for periods of years shown consistent gains in share earnings and dividends. These exceptions seem due to (1) lack of effective regulation in certain states, (2) lenient or politically favorable regulation, (3)

*UTILITY NEW MONEY FINANCING 1951
(in millions)

	December	*Year 1951*	*% Increase Over 1950*
Electric Utilities			
Bonds	$73	$827	5%
Preferred	7	190	D22%
Common	34	333	25%
	$114	$1,350	4%
Gas Utilities			
Bonds	$31	$646	13%
Preferred	10	43	D36%
Common	1	100	78%
	$42	$789	13%
Total electric and gas	$156	$2,139	7%

*As compiled by the Irving Trust Company.



initially inadequate rates of return which are remedied by rate increases, growth, increased efficiency, etc., with "leverage" results on share earnings. Thus there may be at any given time various "growth" factors at work in individual utility situations. Mr. Tatham himself points out that "a favorable time to buy electric utility common stocks, is when the earned return is low . . . opportunities of this sort occur with varying frequency and justify considerable searching by the analyst."

After describing various methods and factors to be used in projecting and forecasting earnings, the book discusses two broad formulas for evaluing utility stocks, both based on the historical results for ten large utility companies referred to above. The first method develops a "range of value" by assuming that the average stock should normally yield between 5½-6½ per cent, and apply these yields to the "estimated capitalizable earnings" (balance for common stock minus 10 per cent of gross income). The second method is to capitalize gross income at about 5 per cent (derived historically), deduct the par value of bonds and preferred stocks, and divide the balance by the number of common shares.

These two formulas are discussed at some length and applied in interesting fashion to Pacific Gas and Electric. Space is lacking to discuss them in detail, but here again our feeling is that too much reliance has been placed on long historical averages, for the largest utilities only. The "range of value," providing a 20 per cent spread between high and low figures, does not seem likely to prove of great practical value to the Wall

Street utility analyst, but seems better adapted to guiding regulatory commissions in the broad analysis of "fair return." Having corrected, adjusted, and projected a utility company's earnings along the lines so well described in *Security Analysis*, the Wall Street statistician will probably place his main reliance on comparison of *current* average yields and price-earnings ratios for groups of *similar* companies; *i.e.*, utilities in the same regulatory area, and with other major characteristics somewhat in common with the company he is studying. Thus wide discrepancies as to size, quality, regulation, etc., may to some extent be avoided or minimized. Such "comparison sheets" are the basis generally used in preparing competitive bids.

Firm Trend in Utility Stock Prices

ALTHOUGH utility stocks have lagged far behind industrials since 1940 (see accompanying chart on page 114) they made a surprisingly good showing in the last four months of 1951. While the Dow-Jones industrial average dropped from the high of 276 on October 18th to 256 November 24th, or about 8 per cent, and rails fell 9 per cent, utilities dipped only 5 per cent during the second half of October and quickly recovered this lost ground, almost "making a line" during the balance of the year. At the close on December 27th, with the usual year-end market rally under way (reflecting the easing of tax-selling pressure and some discounting of January 1st reinvestment) utilities closed at a new high for the year, 46.99. Recent gain in utilities has not been uniform, however. Some of the southern "growth" stocks such as Middle South Utilities, Central & South West, Texas Utilities, and Southern Company have been especially popular. South Carolina Electric & Gas has made a "comeback" (despite failure to earn the dividend, due to drought conditions) on long-term plans for expansion in the "hydrogen bomb plant" area.

Regarding the future outlook for utility stocks, fears have been expressed in some quarters that common stock prices might suffer from the competition of new high-yield preferred issues. In the past few weeks Long Island Lighting and Central Hudson Gas & Electric have offered preferred stocks to yield 5.25 per cent, which about equals the yields on a number of utility equities. However, in our opinion the supply of such high-yield preferreds is apt to prove small and irregular; old-line high-grade preferred stocks still yield only about 4.25 per cent and medium-grade 4.69 per cent, according to the Moody averages. Moreover, buyers of utility stocks in many cases are hopeful of dividend increases, either in 1952 or at some later time when the Federal tax load is lightened; they have seen a number of increases announced during a period of declining earnings, in-

CURRENT YIELD YARDSTICKS

		1951 Range		*1950 Range*	
	Recent	*High*	*Low*	*High*	*Low*
U.S. Long-term Bonds—Taxable	2.74%	2.74%	2.39%	2.42%	2.15%
Utility Bonds—Aaa	3.05	3.09	2.64	2.69	2.55
—Aa	3.11	3.18	2.70	2.74	2.63
—A	3.28	3.32	2.82	2.87	2.75
—Baa	3.58	3.58	3.21	3.21	3.14
Utility Preferred Stocks—High-grade	4.24	4.25	3.77	3.82	3.70
—Medium-grade	4.71	4.71	4.19	4.25	4.13
Utility Common Stocks	5.56	6.11	5.53	6.43	5.31

Latest available Moody indices are used for utility bonds and preferred stocks; Standard & Poor's indices for government bonds and utility common stocks.

dicating that higher pay-out ratios are now "the order of the day."

IN the big bull market of the 1920's when equities were bought mainly for appreciation possibilities, common stocks frequently yielded less than bonds, and even in the early 1930's there was not much difference between the two. During the 1940's, however, interest and preferred dividend rates have long been depressed by the government's cheap money policy and are only now beginning to make some return to "normal." While it is true that yield on equities is relatively more important than in the 1920's, we feel that, as yet, there is little danger of real competition against public utility equities from senior securities.

The utilities may be able to obtain lower dividend rates on future preferred stock issues by making them more attractive in other ways—by adding conversion features, sinking funds for institutional appeal, etc. In some cases debenture issues may be substituted for preferred stock financing (where capital ratios permit) because of tax-savings on interest as compared with dividends. Increased equity financing may also help to take up the slack in preferred stock financing, as it probably did in 1951. Thus the volume of preferred stock financing may be held to a level which will prevent throwing them on the market at high dividend rates.

FINANCIAL DATA ON ELECTRIC UTILITY STOCKS

1950 Rev. (Mill.)			12/26/51 Price About	Current Yield	Share Earnings* Cur. Period	% Increase	Freq. Of Reports**	Price-Earn. Ratio	Dividend Pay-out
168	S	American G. & E. ($3‡)	60	5.0%‡	$4.65o	4%	my	12.9	65%
4	O	Arizona Edison ($1.20)	21	5.7	1.94s	28	qy	10.8	62
5	O	Arkansas Mo. Power ($1)	15	6.7	1.47s	12	qy	10.2	68
18	S	Atlantic City Elec. ($1.30)	22	5.9	1.62n	9	my	13.6	80
4	O	Bangor Hydro Elec. ($1.60) ..	29	5.5	2.10s	D22	qy	13.8	76
2	O	Beverly G. & E. ($3.30)	49	6.7	4.13d	31	a	11.9	82
3	O	Black Hills P. & L. ($1.28)	19	6.7	1.92o	D7	qv	9.9	67
69	B	Boston Edison ($2.80)	46	6.1	3.07s	9	qy	15.0	91
12	O	California Elec. Pr. (60¢)	8	7.5	.55s	D28	qy	14.5	109
11	O	Calif. Oregon Power ($1.60) ..	25	6.4	1.87n	NC	b	13.3	86
34	S	Carolina P. & L. ($2)	34	5.9	3.06n	7	my	11.1	65
13	O	Central Ariz. L. & P. (80¢) ..	13	6.2	.74n	D35	my	17.6	108
17	S	Cen. Hudson G. & E. (60¢)	11	5.5	.69s	—	qy	15.9	87
13	O	Central Ill. E. & G. ($1.30) ...	24	5.4	2.33s	D3	bq	10.3	56
20	S	Central Ill. Light ($2.20)	36	6.1	2.85n	11	mcy	12.6	77
30	O	Central Ill. P. S. ($1.20)	18	6.7	1.47s	—	qy	12.2	82
11	O	Central La. Elec. ($1.80)	31	5.8	3.04s	NC	qy	10.2	59
23	O	Central Maine Power ($1.20) ..	17	7.1	1.37n	D1	my	12.4	88
73	S	Central & S. W. (90¢)	17	5.3	1.34s	—	qy	12.7	67
7	O	Central Vermont P. S. (76¢) ..	11	6.9	.98n	—	my	11.2	78
69	S	Cincinnati G. & E. ($2‡)	39	5.1	2.90s	1	qy	13.4	69
4	O	Citizens Utilities (90¢‡)	19	4.7	2.16s	14	qc	8.8	42
70	S	Cleveland Elec. Illum. ($2.40) ..	50	4.8	3.54s	6	qy	14.1	68
2	O	Colorado Cen. Power ($1)	17	5.9	1.39je	16	qc	12.2	72
28	S	Columbus & S. O. E. ($1.40) ..	20	7.0	1.89s	D7	qy	10.6	74
271	S	Commonwealth Edison ($1.80).	30	6.0	1.94s	D6	qy	15.5	93
7	C	Community Pub. Ser. (90¢) ...	13	6.9	1.16s	D12	qy	11.2	78
1	O	Concord Electric ($2.40)	36	6.7	2.65d	3	a	13.6	91
44	O	Connecticut L. & P. (88¢)	15	5.9	.97o	4	mcy	15.5	91
15	O	Connecticut Power ($2.25) ...	36	6.3	2.37s	D5	qy	15.2	95
393	S	Consol. Edison ($2)	33	6.1	2.24s	3	qy	14.7	89
79	S	Consol. Gas Balt. ($1.40)	26	5.4	1.64s	D9	qy	15.9	85
114	S	Consumers Power ($2)	34	5.9	2.62o	13	mcy	13.0	76
43	S	Dayton P. & L. ($2)	34	5.9	2.82s	2	qy	12.1	71

1950 Rev. (Mill.)		(Continued)	12/26/51 Price About	Current Yield	Share Earnings* Cur. Period	% Increase	Freq. Of Reports**	Price-Earn. Ratio	Dividend Payout
21	S	Delaware P. & L. ($1.20)	26	4.6	1.78s	D5	qy	14.6	67
6	O	Derby G. & E. ($1.40)	22	6.4	2.08d	8	qc	10.6	67
151	S	Detroit Edison ($1.40)	23	6.1	1.68n	D10	b	13.7	83
83	C	Duke Power ($4.75)	84	5.7	6.94s	D11	bq	12.1	68
1	O	Eastern Kansas (60¢)	16	3.8	.90d	18	a	17.8	67
6	O	El Paso Electric ($1.20)	21	5.7	1.77o	8	my	11.9	68
8	S	Empire Dist. Elec. ($1.40)	20	7.0	1.94s	D12	qy	10.3	72
3	O	Fitchburg G. & E. ($3)	47	6.4	3.68d	32	a	12.8	82
21	S	Florida Power Corp. ($1.20) ..	18	6.7	1.30s	D23	qy	13.8	85
46	S	Florida P. & L. ($1.40)	26	5.4	2.44s	D3	qy	10.7	57
1	O	Frontier Power (25¢)	3	8.3	.49d	20	a	6.1	82
126	S	General Pub. Util. ($1.40)	20	7.0	1.68s	D22	qy	11.9	83
4	O	Green Mt. Power ($1)	16	6.3	1.94s	24	qy	8.2	52
29	S	Gulf States Util. ($1.20)	23	5.2	1.60o	D7	my	14.4	75
17	C	Hartford E. L. ($2.75)	47	5.9	2.87s	D2	qy	16.4	96
4	O	Haverhill Electric ($3)	35	8.6	3.14d	12	qc	11.1	96
34	S	Houston L. & P. (80¢)	18	4.4	1.30n	D3	my	13.8	62
15	S	Idaho Power ($1.80)	37	4.9	2.89s	3	qy	12.8	62
45	S	Illinois Power ($2.20)	37	5.9	2.78o	13	b	13.3	79
28	S	Indianapolis P. & L. ($2)	36	5.6	3.03s	5	qy	11.9	66
14	S	Interstate Power (60¢)	9	6.7	.79o	D8	qy	11.4	76
12	O	Iowa Elec. L. & P. (90¢)	14	6.4	1.37o	D17	my	10.2	66
22	S	Iowa-Ill. G. & E. ($1.80)	26	6.9	2.19s	D14	qy	11.9	82
22	S	Iowa Power & Light ($1.40) ...	23	6.1	1.93s	8	bq	11.9	73
20	O	Iowa Pub. Service ($1.20)	20	6.0	1.83n	D9	b	10.9	66
8	O	Iowa Southern Util. ($1.20) ...	16	7.5	1.43o	D7	b	11.2	84
32	S	Kansas City P. & L. ($1.60) ...	27	5.9	1.89o	D5	b	14.3	85
14	O	Kansas Gas & Elec. ($2)	34	5.9	2.93n	D4	my	11.6	68
26	S	Kansas Pr. & Lt. ($1.12)	17	6.6	1.27s	D15	qy	13.4	88
23	O	Kentucky Utilities ($1)	16	6.3	1.44s	14	qy	11.1	69
5	O	Lake Superior D. P. ($1.80) ..	26	6.9	2.45s	6	qy	10.6	73
6	O	Lawrence G. & E. ($2.40)	38	6.3	3.10d	6	qc	12.3	77
47	S	Long Island Lighting (80¢) ...	14	5.7	1.18s	11	qy	11.9	68
30	S	Louisville G. & E. ($1.80)	34	5.3	2.98s	6	qy	11.4	60
6	O	Lowell Elec. Lt. ($3.35)	45	7.4	3.96d	18	qc	11.4	90
7	O	Lynn G. & E. ($1.60)	28	5.7	2.12d	9	a	13.2	94
5	O	Madison G. & E. ($1.60)	32	5.0	2.31d	22	q	13.9	69
2	C	Maine Public Service ($1.20) ..	16	7.5	1.63o	—	my	9.8	74
3	O	Michigan Gas & Elec. ($1.80) ..	26	6.9	2.49s	20	qy	10.4	72
100	S	Middle South Util. ($1.20) ...	22	5.5	1.77n	2	qy	12.4	68
16	S	Minnesota P. & L. ($2.20)	32	6.9	3.09n	D11	my	10.4	70
1	O	Missouri Edison (70¢)	10	7.0	1.14je	9	qy	8.8	61
5	C	Missouri P. S. ($2.60)	46	5.7	5.12d	16	qc	9.0	51
4	O	Missouri Utilities ($1)	16	6.3	1.71s	18	qy	9.4	58
26	S	Montana Power ($1.55)	28	5.5	2.32o	D19	my	12.1	67
12	C	Mountain States P. (84¢)	12	7.0	1.18s	10	qy	10.2	71
107	S	New England Elec. (80¢)	12	6.7	1.26s	D11	qc	9.5	63
31	O	New England G. & E. ($1) ...	14	7.1	1.10n	D13	b	12.7	91
37	O	New Orleans P. S. ($2.25)	40	5.6	2.77o	2	my	14.4	81
1	O	Newport Electric ($1.80)	28	6.4	2.35o	D18	my	11.9	77
52	S	N. Y. State E. & G. ($1.70) ...	29	5.9	2.11n	2	my	13.7	81
152	S	Niagara Mohawk ($1.60)	24	6.4	1.95o	NC	qy	12.3	82
82	S	North American ($1.20)	19	6.3	1.23s	D15	qy	15.4	98
48	O	Northern Ind. P. S. ($1.40)	22	6.4	2.21o	4	c	10.0	63
81	S	Northern States Power (70¢) ..	11	6.4	.86o	NC	qy	12.8	81
7	O	Northwestern P. S. (80¢)	11	7.3	1.25s	D4	qy	8.8	64
86	S	Ohio Edison ($2)	33	6.1	2.60o	D1	mcy	12.7	77
26	S	Oklahoma G. & E. ($1.30)	21	6.2	1.64s	3	qy	12.8	79
12	O	Otter Tail Power ($1.50)	20	7.5	1.83o	3	c	10.9	82
237	S	Pacific G. & E. ($2)	34	5.9	2.01s†	D2	bq	16.9	99
19	O	Pacific P. & L. ($1.10)	15	7.3	1.50o	NC	my	10.0	73
78	S	Penn Power & Light ($1.60) ...	27	5.9	2.13o	D2	my	12.7	75
8	C	Penn Water & Power ($2)	39	5.1	2.23d	5	qc	17.5	90

1950 Rev. (Mill.)		(Continued)	12/26/51 Price About	Current Yield	Share Earnings* Cur. Period	% Increase	Freq. Of Reports**	Price-Earn. Ratio	Dividend Pay-out
156	S	Philadelphia Elec. ($1.50)	29	5.2	2.10o	D2	qy	13.8	71
23	O	Portland Gen. Elec. ($1.80) ...	28	6.4	2.67n	D3	c	10.5	67
38	S	Potomac Elec. Power (90¢) ..	15	6.0	1.09s	35	qy	13.8	83
43	S	Pub. Serv. of Colo. ($1.40) ...	27	5.2	2.04s	D10	qy	13.2	69
186	S	Pub. Serv. E. & G. ($1.60)	24	6.7	2.05je	NC	qc	11.7	78
45	S	Pub. Serv. of Ind. ($1.80)	29	6.2	2.02o	2	c	14.4	89
15	O	Public Serv. of N. H. ($1.80) ..	23	7.8	2.00n	8	mcy	11.5	90
6	O	Public Serv. of N. H. ($1)	18	5.6	1.72s	12	qy	10.5	58
26	O	Puget Sound P. & L. (80¢) ...	19	4.2	1.64o	D13	my	11.6	49
34	S	Rochester G. & E. ($2.24)	33	6.8	2.33s	D3	qy	14.2	96
7	O	Rockland L. & P. (60¢)	10	6.0	.68s	—	b	14.7	88
25	O	San Diego G. & E. (80¢)	14	5.7	1.09o	D11	b	12.8	73
10	S	Scranton Elec. ($1)	14	7.1	1.13o	D8	my	12.4	88
5	O	Sierra Pacific P. ($1.60)	23	7.0	1.98o	1	my	11.6	81
105	S	So. Calif. Edison ($2)	34	5.9	2.96s	17	qy	11.5	68
21	S	So. Carolina E. & G. (60¢) ...	9	6.7	.53s	D32	mcy	17.0	113
4	O	Southern Colo. P. (70¢)	10	7.0	.86ag	9	c	11.6	81
133	S	Southern Company (80¢)	12½	6.4	.99n	D1	my	12.6	81
10	S	So. Indiana G. & E. ($1.50) ...	21	7.1	1.89n	D9	mcy	11.1	79
2	O	Southwestern E. S. (88¢)	12	7.3	1.38ag	7	—	8.7	64
19	O	Southwestern P. S. ($1.12)	18	6.2	1.35o	8	mcy	13.3	83
6	S	St. Joseph L. & P. ($1.50)	25	6.0	1.93s	—	qy	13.0	78
11	C	Tampa Electric ($2.70)	39	6.9	2.91n	D14	my	13.4	93
67	S	Texas Utilities ($1.68)	34	4.9	2.65o	12	qy	12.8	63
6	O	Tide Water Power (60¢)	9	6.7	.72n	D38	b	12.5	83
27	S	Toledo Edison (70¢)	10½	6.7	.92s	D10	qy	11.4	76
6	O	Tucson G. E. L. & P. ($1.60) ..	26	6.2	2.26s	5	bq	11.5	62
21	O	United Illum. ($2.40)	41	5.9	2.84d	6	—	14.4	85
2	O	Upper Peninsula P. ($1.20) ...	15	8.0	1.41s	D7	bq	10.6	86
21	S	Utah Power & Light ($1.80) ..	30	6.0	2.37n	D4	mcy	12.7	76
63	S	Virginia E. & P. ($1.20)	22	5.5	1.66n	D1	mcy	13.3	72
94	S	West Penn Elec. ($2)	29	6.9	2.98o	D3	b	9.7	67
49	O	West Penn Power ($2.30)	37	6.3	2.12s	2	qy	17.5	108
7	O	Western Lt. & Tel. ($1.60)	23	7.0	2.23s	17	qy	10.3	72
18	O	Western Mass. Cos. ($2)	30	6.7	2.15o	D19	qc	14.0	93
65	S	Wisconsin E. P. ($1.30)	23	5.7	1.93s	4	qy	11.9	67
23	O	Wisconsin P. & L. ($1.12) ...	17	6.6	1.40s	D4	qy	12.1	80
		Averages		6.2%				12.4	77%
Canadian Companies††									
C		Brazilian Trac. L. & P. ...	13	1.00	7.7	2.35d	4	qc	5.5	43
C		Gatineau Power	17	1.20	7.1	1.46d	2	qc	11.6	82
C		Quebec Power	17	1.00	5.9	1.33d	9	qc	12.8	75
C		Shawinigan Power	39	1.45	3.7	1.98d	39	qc	19.7	73
C		Winnipeg Electric	38	2.40	6.3	2.44d	D4	s	15.6	82

d—December, 1950. je—June, 1951. ju—July, 1951. ag—August, 1951. s—September, 1951. o—October, 1951. n—November, 1951. B—Boston Exchange. C—Curb exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. E—Estimated. NC—No comparable figures available. *If additional common shares have been recently offered, earnings are adjusted to give effect to the offering. Percentage change is in the balance available for common stock. †Earnings on *average* shares outstanding $2.15; price-earnings ratio on this basis 15.8 and dividend pay-out 93 per cent. ††While these stocks are listed on the Curb, Canadian prices are used. (Curb prices are affected by exchange rates, etc.) ‡Stock dividend also paid in 1951. **The following symbols are used in this column to indicate the periods and frequency of earnings reports: a—Calendar year only. b—Twelve months only (reported monthly). bq—Twelve months only (reported quarterly). c—Cumulative months and twelve months. m—Month only. mc—Latest month and cumulative months. mcy—Latest month, cumulative months, and twelve months. mqy—Latest month, three months, and twelve months. my—Latest month and latest twelve months. q—Latest quarter only. qc—Quarters cumulatively. qy—Latest quarter plus last twelve months.

What Others Think

Power behind Industrial Expansion

THE tremendous industrial expansion in this country during the past year and that planned for the future was stressed by George M. Gadsby, president, Edison Electric Institute, and president, Utah Power & Light Company, in his year-end progress report of the electric power industry. He emphasized that all these new industrial expansions must have electricity.

Gadsby stated that the electric industry again responded to the needs of all these fast-swelling industrial enterprises and at the same time met the ever-increasing demands for more and more electricity in the home, on the farm, and by the commercial users for better lighting and the multitudinous varieties of utilization devices. He added that the very fact that not only electricity must be there but it must be there *first*, has put the suppliers of this all essential service in the forefront of the race for more production of everything from war material to butter and eggs.

The EEI president pointed out that during the year the demand for power was met, excepting in one or two areas where nature conspired to reduce stream flows, thus curtailing hydroelectric output. In only one instance, the Pacific Northwest, according to Gadsby, did the situation warrant the preparation of a Federal curtailment order; then timely rains made enforcement unnecessary.

As to material shortages, Gadsby stated that the industry is currently straining against a bottleneck of the flow of materials—steel, copper, aluminum, nickel, and a few other scarce alloy metals—to the manufacturers of heavy equipment for power-generating stations. Based on reduced and inadequate allotments of these critical materials to the manufacturers, some slippages already have occurred in production schedules and more are impending, so on the basis of the situation existing in the last half of 1951, indications are that the delay in delivery of equipment and of fabricating steel will cause a minimum reduction in the scheduled additions of 25 per cent and might cut in half the scheduled expansion of steam-generating plants in 1952.

THE utility executive declared that construction expenditures of the electric utility companies in 1951 equaled the budget for construction of $2,250,000,000. He added that the 1952 budget for scheduled construction is estimated to reach $2,750,000,000, although delays in deliveries of equipment due to the shortage of materials are expected to reduce actual expenditures considerably.

Gadsby then showed the continued improvement being made in fuel efficiency. He noted:

> Another feature of the year 1951 was the continued improvement in fuel efficiency of steam-electric generating stations, reflecting the operating results of new plants which were put into operation. Average fuel consumption dropped from 1.19 pounds of coal per kilowatt hour in 1950 to 1.13 pounds in 1951. The performance on a yearly basis of the most efficient plant was reported as .84 pounds of coal per kilowatt hour.

The near completion of area coverage of electric service to farms, according to Gadsby, also featured the year 1951, at the year end electric power having been made available to 95 per cent of the occupied rural farm dwelling units. He declared that emphasis on farm electrifica-

tion is shifting from the almost completed area coverage by power lines, to more intensive development of equipment and methods which will enable the farmer to make more profitable use of the electric service at his disposal.

The power executive turned to the low-priced electricity dollar. He observed:

> Electricity as an inexpensive helper in industry and in the home was further emphasized by contrast with the upswing in most prices in the past twelve months. In mid-1951, the manufacturer's dollar, according to the National Industrial Conference Board, purchased only 40 cents of its 1939 purchasing power in labor, only 43 cents in construction, and only 30 cents in raw materials, but the electricity it bought in 1951 would have cost $1.12 in 1939.
>
> Similarly, the home consumer's dollar in 1951 purchased only 44 cents of the 1939 value in food, only 49 cents in clothing, 74 cents in rent, but bought electric service that would have cost $1.05 in 1939.

THE EEI president then outlined the gains made in generating capability. He stated that the total electric generating capability of the electric light and power industry climbed to 78,500,000 kilowatts at the end of 1951; 7,500,000 kilowatts, out of 8,000,000 scheduled, were actually installed during the year.

He continued that over 370 billion kilowatt hours of electric power were generated by the electric industry in 1951, 40 billion kilowatt hours more than 1950's production. In addition, 62 billion kilowatt hours were generated by industrial and railway plants for their own use, bringing the grand total of electricity production for the United States in 1951 to 432 billion kilowatt hours.

Gadsby then traced the customer gain of the industries. He stated:

> About 1,900,000 new customers were added during 1951, bringing the total to 46,900,000 customers. Electric service is now available to about 97 per cent of all occupied urban and rural homes in the nation. The prospect is for a drop in the number of new customers added in 1952, the total for 1951 being somewhat less than the 1950 record of over 2,100,000.
>
> At the end of 1951 about 700,000 farms out of a total of 5,384,000 farms, occupied and unoccupied, were without electric service. Of this number about 450,000 were occupied, of which about 150,000 have electricity available but are not yet taking service.

Sales also set a record. The utility man noted that annual sales in the past year crossed the 300 billion kilowatt-hour mark for the first time; a record advance of some 38 billion kilowatt hours pushing the total to over 318 billion kilowatt hours. The household consumer's average annual use of electricity reached a new high of 2,000 kilowatt hours, compared with 1,830 kilowatt hours in 1950.

Sales to industrial customers in 1951 increased 13.6 per cent; sales to commercial customers increased 15 per cent.

Large industrial users, according to Gadsby, reflecting the beginning of added production for defense, boosted their use of power during the year over 19 billion kilowatt hours, by far the largest annual increase on record, to a total of 158 billion kilowatt hours. Smaller power users also increased their use by a record amount to a total of 58 billion kilowatt hours.

THE Utah power executive also reported that total revenues of the investor-owned electric companies during 1951 increased 10 per cent over the previous year to a new record of $5 billion. Net income available for dividends and retention in the business decreased from $831,000,000 in 1950 to $814,000,000 in 1951, due to more taxes and inflationary wages and prices.

He added that money invested in the electric companies' plant and property at year end was approximately $20,425,000,000, an increase of almost $1.5 billion over 1950.

Of taxes, Gadsby stated:

Taxes of all kinds continue to be the largest item of expense. The 1951 tax bill was $1,132,000,000 on electric operations only, 19 per cent higher than in 1950; adding the gas department companies supplying both services, the total tax take was $1,250,000,000.

Of the total electric taxes, $704,000,000 went to the Federal government, and $428,000,000 to state and local governments. Some 23 cents of each dollar received by the electric companies was paid over by them to government in taxes.

Wages and salaries, the second largest expense item, totaled just over $1 billion for 1951, $89,000,000 over 1950. The fuel bill was $863,000,000, an advance of $99,000,000.

It is fortunate that, partially offsetting these cost increases, the installation of new electric equipment under the expansion program increased the efficiency and economy of operations.

THE EEI president then turned to large-scale government expenditures in the power field. He declared:

> This review cannot be concluded without reference to the continued use of the heavily burdened taxpayer's money for extension of government ownership in the business of supplying electricity. Much of this tax money is being spent for unnecessary and duplicating facilities. Only congressional vigilance prevents an even worse outpouring of tax money from the U. S. Treasury. In business enterprises the Federal government is not and has not been economically successful but always a drain of our taxes. It has amply demonstrated the same inept cost estimating and failure to meet all the costs in the electric power business. So-called private enterprise—actually true public ownership through wide distribution of shareholdings—is the most efficient agency for all business and the socialism of government ownership has ever and always resulted in more taxes, poorer service, and special privilege for a favored few.

GADSBY concluded by stating that the danger of losing our free enterprise system and yielding to a planned economy administered for political objectives was never before in our country's history as great as it is now. Socialism, if tolerated and encouraged in the field of electric supply, according to the EEI president, will soon hold all industry and then all people in its stifling power. He added that the American people, through their ownership of American industry as investors and shareholders, can and—for the sake of our country itself—will build on great plans, holding the world's first place in an adequate, dependable electricity supply for every want and need.

The Gas Industry through the Year

GEORGE F. MITCHELL, president, American Gas Association, and president, Peoples Gas Light & Coke Company, Chicago, Illinois, has made a year-end report on the progress of the gas industry.

The gas official pointed out that the tremendous demand for gas service that has existed since the end of World War II still continues and it lifted the gas utility industry to new high levels in 1951. For the first time in its history, according to Mitchell, revenues of the gas industry from sales of utility gas passed the $2 billion mark. Also for the first time, its customers numbered more than 25,000,000. The volume of gas sold during 1951 established a new record. Nearly one and one-half billion dollars, the record amount for a single year, was spent by the gas industry for new plant and equipment last year.

The AGA president added that the natural gas industry continued its spectacular growth, as natural gas reached new territories, and supplies to present terri-

tories were substantially increased. Of the total $1.5 billion spent on new construction by the entire industry last year, nearly $1 billion went for new facilities and expansion of present facilities of the natural gas branch of the industry. Transmission, distribution, and gathering lines of the natural gas system now extend more than 315,000 miles. He continued:

> This huge expansion program still leaves the industry short of meeting the steady consumer demand for gas. The American Gas Association estimates that in the five years from 1951 through 1955, nearly $4.6 billion will be spent by the gas industry for expansion programs. Because of shortages of steel and other vital materials, it is believed that the expenditures of $1.5 billion in 1951 will be the peak in the current expansion period. However, the gas utilities and pipeline companies have allocated about $1.3 billion for expansion in 1952.

THE utility official then set forth the vital statistics of the gas industry:

> The gas utilities were serving approximately 25,392,000 customers at the end of 1951, including about 322,000 LP-gas customers served by gas utility companies. This represents an increase of 3.7 per cent over the previous record figure of 24,478,000 customers on gas utility lines at the end of 1950.
>
> There were 17,167,000 customers receiving natural gas at the year end, an increase of 14.2 per cent over the 15,030,000 natural gas customers reported a year earlier. Manufactured and mixed gas customers totaled 7,902,000 at the end of 1951. This was a decrease of 13.4 per cent under the previous year. The decline reflects the effects of change-overs by several important utility companies to the distribution of natural gas.
>
> Residential customers numbered 23,412,000 at the end of the year, an increase of about 3.7 per cent over the previous year. In addition to these customers of the gas utilities, an estimated 6,500,000 customers were using LP-gas in areas not served by gas companies. This means that 30,000,000 homes in the United States are using gas as the major domestic fuel.
>
> Total sales of gas in 1951 amounted to 47,869,000,000 therms, an increase of 13.7 per cent over 42,090,000,000 therms sold in 1950. Natural gas sales totaled 44,421,000,000 therms, up 15.4 per cent from the previous year. Manufactured and mixed gas sales were down 4 per cent to 3,359,000,000 therms.
>
> Revenues from the sale of utility gas reached a new record level of $2,205,370,000, a gain of 13.2 per cent over the previous high of $1,948,002,000, established in 1950. Natural gas continued its spectacular gains in revenue, totaling $1,649,050,000, an increase of 21.2 per cent over the previous year. Again reflecting the impact of change-overs, manufactured and mixed gas revenues were down 5.4 per cent to $535,210,000 in 1951. The gas industry accrued about $21,110,000 last year from sale of LP-gas and other sources.

MITCHELL then reported that the rapid extension of natural gas lines and the consequent expansion of natural gas service in both new and old areas continues unabated. During 1951 natural gas reached New England, and the first cities in that region, nearly 2,000 miles away from the wells, were converted to natural gas. Metropolitan New York also received natural gas in volume last year. Plans to construct additional pipelines are nearing completion.

He added that with natural gas in New England an accmplished fact, there are now, according to Mitchell, 39 states in the country being served with natural gas. The Pacific Northwest is the only populated area not receiving this premium fuel. At least two companies are seeking authorization and sources of supply to bring natural gas to the Pacific Northwest. One company would bring gas from Texas and another company Canada.

The March of Events

In General

FPC Grants Wholesale Rate Increase

THE Federal Power Commission recently authorized an $11,400,000 annual increase in wholesale natural gas rates charged by Tennessee Gas Transmission Company. The increase was in lieu of an $18,000,000 boost sought by the company originally.

Tennessee Gas was ordered to file new rate schedules designed to realize the $11,400,000 increase in revenue on or before January 11th. They would be effective as of December 17, 1951. The commission specifically retained the right to make changes in the proposed new schedule to get "a proper distribution of the increase among Tennessee's various rate zones."

If Tennessee collects revenue from any particular customer in excess of the amount due under the rate schedules ultimately established, the excess must be refunded. However, if the amount collected is less than the charge ultimately approved, Tennessee would not get the extra money retroactively.

Tennessee sells natural gas at wholesale to customers who serve areas of Louisiana, Mississippi, Tennessee, Kentucky, West Virginia, Ohio, Pennsylvania, New York, and New England.

California

Rise Seen in Gas, Electric Needs

INDUSTRY already located and operating in California will need 38 per cent more electricity and 30 per cent more gas in 1954 than last year, according to figures presented to the state public utilities commission by the California Manufacturers Association.

The association emphasized that its figures covered the expanding needs of existing concerns only, and did not include allowance for new plants that might be established or the increasing requirements of government agencies.

The survey was supervised by the association's statewide committee on fuel, power, and water.

Plants depending on an uninterrupted supply of gas at firm rates will need approximately 30 per cent more gas in 1954 than last year, and those which use large amounts of gas on an interruptible basis (subject to turn off during extreme cold snaps or emergencies) will use about 17 per cent more gas in 1954 than last year.

The association obtained its figures on gas and electric requirements by a survey of the opinion of the management of 715 manufacturing plants. The sample included a significant segment of the total gas and electric energy delivered to all industrial users in the state. It covered 39 per cent of the state's total firm industrial gas volume, and 57 per cent of the state's total interruptible industrial gas volume.

The survey was initiated by executives of manufacturing firms interested solely in an adequate supply of equitably priced fuel and power, it was said.

District of Columbia

Interest on Refunds Disallowed

THE United States Court of Appeals recently disallowed payment of interest to consumers on excess gas rate refunds. The increased rates, totaling about $1,250,000, had been thrown out in a 1950 district court ruling and refunds to consumers were made after the appellate court later upheld the lower court's action.

At the time it rejected the rate increase, the district court ordered interest at 5 per cent to be paid by the company on the refunds. But the recent action by the appellate court overturned that phase of the lower court ruling. Roughly about $65,000 in interest payments was saved the Washington Gas Light Company by the tribunal's action.

An application for a new rate increase by the company is now on file with the commission.

Indiana

Loses Attempt to Regain Jurisdiction

A NEW attempt by the state public service commission to regain jurisdiction of the $10,100,000 rate case of Indiana Bell Telephone Company was lost last month before the state supreme court.

The five judges ruled unanimously against a petition for a writ of mandate which would have thrown the case out of the Marion County Circuit Court.

Attorney General J. Emmett McManamon presented the petition, but after a conference of the judges with McManamon and the utility's attorney, the court announced verbally it had decided to deny the petition.

McManamon argued Judge Claycombe was mandated by a 1929 law to dismiss the Bell appeal because the state commission last November canceled its rate order to which the utility was objecting.

The Bell appeal is from a commission rate order issued last May.

Iowa

Utility Commission Studied

PUBLIC hearings will be conducted by an Iowa state legislative interim committee studying the advisability of creating a state utilities commission.

Dates for the hearings had not been announced by the committee, which held its organization meeting December 19th and was scheduled to meet again January 5th.

The 9-member group, appointed by Governor Beardsley, probably will study a uniform public utilities commission bill which was drawn sometime ago for consideration by any interested state.

The Council of State Governments also would be contacted for any uniform measures that organization might have on the subject of state regulation of public utilities, it was said.

Kansas

New Electric Rate Schedule Approved

THE state corporation commission last month approved a new schedule of electric power rates for the entire system of the Kansas Power & Light Company, effective January 1st.

The commission chairman said the

new rates would increase revenue by 2.94 per cent, but their effect would vary from one locality to another. He explained the new schedule "levels out rates, some of which have been in effect twenty-five years and removes discrepancies in the charges for electricity in towns and cities of similar size."

The new rates will be as much as 20 per cent lower in some towns but there will be substantial increases at others. The rates allow the company to include in its gross revenue a 10 per cent surcharge now being collected but which was due to expire at the end of the current calendar year.

Maryland

Seeks Rate Increase

THE Consolidated Gas, Electric Light & Power Company of Baltimore last month asked the state public service commission's approval of a 10.4 per cent increase in basic rates charged for electricity and steam.

If granted, this would boost bills of 424,124 customers approximately $6,500,000 annually.

More than $4,000,000 of the proposed increase would go for Federal taxes, the utility disclosed.

In its petition to the commission, the utility asked approval by March 15th so that the rates could be put in effect beginning April 1, 1952.

No request was made for an increase in the gas rate.

Higher labor and material costs, plus soaring Federal taxes, were cited by the company's president as the chief reasons for the rate rise request.

Ohio

Files Rate Increase Application

COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY last month applied to the state public utilities commission for a system-wide increase in electric rates for industrial service and large commercial light and power service.

The increase is expected to augment revenues by $1,625,000 annually, based on the company's 1951 operating experience, and to add about $694,000 to net earnings after deducting Federal taxes.

No increase was sought in rates for residential service or for small commercial light and power users.

"The proposed rate increase, the first in more than twenty years," the management stated, "is essential to enable the company, in competition with other industries, to attract the new capital which it must have to finance in some measure the cost of restoring and maintaining adequate reserve capacity lost during World War II and thereafter, due to shortage of construction materials and man power during the war period, coupled with steadily increasing loads." The increase was said to be equally essential to enable the company to maintain adequate electric service and to offset in some degree increasing operating expenses, including taxes.

Oklahoma

Voters Approve Franchise

VOTERS of Oklahoma City last month approved a new 25-year franchise for the Oklahoma Gas & Electric Company by a margin of about 30 to 1.

The vote for the new franchise under which the company will continue to supply electricity for Oklahoma City was 13,458 for the franchise and 429 against.

Under the new franchise, OG&E will

pay the city a tax of 2 per cent of its gross collections, instead of the present 1 per cent tax. Also, the new franchise requires the company to furnish the city half-price electricity for street lights, and free current for other department operations up to a minimum about double the free current now being furnished.

It was estimated the new franchise plan will net the city about $250,000 annually. Costs of the special election were paid by OG&E.

The present franchise does not expire until November 18, 1955. However, company officials sought the renewal at this time to permit long-range planning.

Oregon

FPC Grants Dam License

THE Federal Power Commission last month granted the application of the Portland General Electric Company for construction of the Pelton power dam on the Deschutes river. Long-drawn-out legal action over the project is expected.

The FPC, directing that a 50-year license be issued to PGE for the project, estimated to cost $22,070,000, said the Deschutes probably is the most readily available source of new power in the Pacific Northwest.

J. H. Polhemus, president of PGE, said the company was prepared to proceed with construction of the Pelton project immediately.

John C. Veatch, chairman of the Oregon state fish commission which has led the long fight opposing construction of any dam in the Deschutes, said when the company starts to build a dam "we will move in." He said "moving in" means all legal action that can be taken to block the power project. The fish commission has taken the position that the FPC has no power to override state laws on a stream wholly within the state, and which is non-navigable.

Pennsylvania

Senate Defeats Telephone Bill

A BILL placing small co-operative telephone firms under jurisdiction of the state public utility commission met defeat in the senate recently, 16 to 17. They now are exempt from regulation.

Senator William J. Lane (Democrat, Washington) asked for defeat of the bill on grounds that it would hand over rural telephone service to "a monopoly which would not furnish telephone service to remote points."

Senator Murray Peelor (Republican, Indiana) said co-operative telephone companies, aided by the Rural Electrification Administration, bring phone service to between 60,000 and 70,000 farmers and that service should not be harmed.

Virginia

Tax on Utility Bills Increased

AN additional 3 per cent tax on utility bills was authorized last month by the Petersburg city council. The higher tax on utility bills goes into effect February 1st and will affect all users of gas, water, telephones, and electricity. It is estimated the increased tax will bring in $40,000 annually.

Besides ordering the higher rate on utility bills, the council also authorized that minimum water bills be adjusted to the nearest even amounts. Water bills will carry the additional 3 per cent tax after February 25th.

The later date for the water bills is due to the method of meter reading and billing.

Progress of Regulation

Direct Gas Service to Industrial Customers by Pipeline Company to Be Regulated by State

THE Illinois commission ordered Panhandle Eastern Pipe Line Company to file schedules of rates and charges, reports of its operations, and otherwise generally to comply with the provisions of the Illinois Public Utilities Act.

The commission held that sales of direct gas service by this company to industrial customers are subject to the same state regulation as are similar sales made in intrastate commerce by public utilities engaged in the local distribution of natural gas in the state.

This company's facilities in Illinois were originally owned by Panhandle Illinois Pipe Line Company, a wholly owned subsidiary. They were constructed and operated under a certificate of convenience and necessity from the state commission. Panhandle Illinois was regulated as a public utility. Later, Panhandle Illinois conveyed all its facilities to Illinois Natural Gas Company (another subsidiary) and to Panhandle Eastern. After that, Illinois Natural, without applying for or receiving authority from the state commission, transferred all its assets to Panhandle Eastern.

Panhandle Eastern acquired sales contracts for the direct sale of gas to industries and continued to provide direct gas service. The company engaged in the active solicitation of new industrial customers and increased the number of industrial plants served. Panhandle has frequently engaged in active competition with public utilities and, according to the commission, has deprived a portion of the public of the privilege of obtaining a public utility service from a regulated public utility under prices, terms, and conditions of service prescribed by law.

Representatives of the company, said the commission, had stated that its policy was to expand direct gas service to industrial customers for the reason that the rates charged for such service were unregulated. The company had taken the position that under the ruling of the Supreme Court in Colorado Interstate Gas Co. *v.* Federal Power Commission (1945) 324 US 581, 58 PUR NS 65, this service was not subject to state regulation.

The commission referred to the decision in Panhandle Eastern Pipe Line Co. *v.* Indiana Pub. Service Commission (1947) 332 US 507, 71 PUR NS 97, that the Natural Gas Act does not preclude state regulation of direct sales of gas service to industrial customers. It also referred to the decision in Panhandle Eastern Pipe Line Co. *v.* Michigan Pub. Service Commission (1951) 341 US 329, 89 PUR NS 1, upholding the authority of the state of Michigan to enjoin the direct sale of gas by Panhandle to an industrial customer in Michigan without obtaining a certificate of convenience and necessity.

Effective regulation, continued the commission, requires that these direct sales to industrial customers within the state, though made in interstate commerce, be subject to state regulation. The commission ruled that Panhandle East-

ern owns, controls, operates, and manages within the state, directly or indirectly for public use, plant, equipment, and property used in connection with the sales, delivery, and furnishing of heat and power within the meaning of § 10 of the Illinois Public Utilities Act; that by virtue of its direct gas service to industrial customers it is a public utility within the meaning of that law; that the furnishing of this service is subject to regulation by the commission; and that schedules and reports must be filed. *Illinois Commerce Commission v. Panhandle Eastern Pipe Line Co. 38142, December 13, 1951.*

Construction Requirement in Rate Order Voided Because of War Shortages

THE Connecticut commission modified its earlier order authorizing a water rate increase by deleting that portion of the order requiring the company to construct a reservoir immediately. The company showed to the commission's satisfaction that by virtue of changed conditions it would be impracticable, unnecessary, and dangerous to the company's credit to proceed with the construction of the reservoir, or any other large-scale watershed development program at this time.

The company submitted a well supply plan which should provide an adequate supply of water with which to meet immediate service problems. However, this factor alone was not deemed sufficient to support the deletion of the requirement for reservoir construction. Considerable emphasis was laid on the difficulty of constructing a major reservoir project in the face of existing and threatened shortages of materials and labor and of the high cost of construction generally prevailing. Steel cables and cement were emphasized as being principally subject to this disadvantage. The upsurge of employment arising from industrial activity in connection with the accelerated program of national defense was submitted as creating a risk of labor shortage.

The commission observed that while the construction difficulties and risks of shortages might not render the construction of a large-scale impounding reservoir impossible, sufficient question did exist to raise a genuine doubt as to whether an undertaking of the magnitude of the reservoir should be started at this time, if adequate substitute sources of supply were available.

The commission also considered the problem in the atmosphere of the company's costs and earnings. A comparison of earnings before and after the rate increase showed that the increased rates were largely offset by increased operating costs. The new rates yielded a return of only about 5.13 per cent. The commission observed that next year the full impact of the increased Federal income taxes will make that return less favorable. It found that present rates will provide a sum sufficient to enable the company to meet its operating expenses, interest on its outstanding long-term indebtedness, and dividends on its present capital stock. They will not, however, be adequate to service the additional bonds and to pay dividends on additional common stock which the company planned to issue to finance the reservoir.

The indicated return of 5.13 per cent was deemed reasonable. Faced with this consideration and with possible shortages and present costs of construction, and having concluded that the well supplies were adequate, the commission decided that postponement of the construction of a large-scale reservoir at this time would be proper. The commission decided the case on the principle that the first responsibility of enlightened public utility regulation is to assure, to the extent of the commission's jurisdiction, adequate and continuous service commensurate with reasonable rates. *Re Bridgeport Hydraulic Co. Docket No. 8391, December 6, 1951.*

Service Area Assigned to Telephone Company in View of Customer Preference

THE North Carolina commission ordered the Southern Bell Telephone & Telegraph Company to serve a rural area which a small telephone company proposed to serve. The area is a growing, prosperous community without telephone service. The people of the community, almost without exception, preferred Southern Bell service.

Previously the commission had declared the area to be "open territory" and "authorized" the Southern Bell Company to serve the area. This order, however, was deemed to be merely a pointed suggestion rather than an unequivocal direction for the company to extend service. The problem remained unsettled, however, because Southern Bell did not furnish the service and the residents of the area had been unwilling to accept the smaller company's service.

Southern Bell has never served the area and does not consider it within the bounds of the territory which it holds itself out to serve. On the other hand, the small company entered the area, erected poles, and attempted to serve until its efforts were arrested by the general opposition of the people in the area. The Southern Bell Company urged the smaller company to go into the territory, since it had no plans to do so. The people declined to give the small company right of way across their lands.

The North Carolina law makes no mandatory provision for the assignment of a definite franchise territory or service area within which each telephone company is to operate. In most instances the various companies have agreed among themselves as to the boundaries. As a general policy the commission recognizes such service area boundaries.

If the service problem cannot be settled by mutual agreement, the commission deems it to be its duty to decide the issue and to require action in accordance with its best judgment. Service area boundaries, as agreed upon by respective companies, have no official status under the law and are subject to change by the commission when necessary in the public interest. It is left to the commission's judgment to determine whether or not it is reasonable and feasible for service to be extended, and by whom.

The commission pointed out that the small company has very little investment or value in telephone plant and equipment. Its central office exchange equipment is outmoded and small. One of the owners is in poor health and largely incapacitated. The other owner is without adequate technical skill and is unfamiliar with operations of a telephone system. The commission said that with the comparatively large concentration of population and business in a community where Southern Bell's exchange is located, that company must expect and plan to extend service into adjacent outlying areas.

The fact that the area in question is slightly closer to the small company's exchange is more than outweighed by the difference in size and general business and social interests of the two places. The small company has more than enough to tax its capabilities in improving and making available its service to new subscribers at places where the company is actually serving.

Commissioner Hunter dissented on the ground that the commission did not have power to order the small company to withdraw from the area and to order Southern Bell to enter and provide service. *Re Telephone Service for Pender County, Docket No. 4575, November 28, 1951.*

Failure to Render Adequate Service As Ground for Competition

A TELEPHONE company was authorized by the Wisconsin commission to serve certain petitioners within the territory of an existing company where the

existing company had been given a reasonable opportunity, by previous order, to provide adequate service, but failed to do so and apparently was unable to do so.

A public utility that does not render adequate service in its territory is entitled to a reasonable opportunity to make its service adequate. It was pointed out that when a utility, after reasonable opportunity, fails to provide adequate service, the commission has power under the law to find the extension of service by another company into the affected area is required by public convenience and necessity. *Federman et al. v. Mecan Teleph. Co. et al. 2-U-3414, November 21, 1951.*

Discrimination in Intrastate Bus Transportation

To refuse to allow a colored passenger to occupy the last remaining seat in an interstate bus next to a white passenger does not constitute discrimination, according to the Virginia Supreme Court of Appeals. The public policy of the state, as evidenced by statute, it was pointed out, is that white and colored passengers in intrastate carriage, although given equal accommodations, shall be separated from physical and intimate contact. The statute further provides that no contiguous seats on the same bench shall be occupied by white and colored passengers at the same time.

The court held that no paramount rights or privileges are given to one race over the other or to one individual over another by such legislation. A member of the white race or a member of the colored race may find, under such conditions, that no seating accommodations are available. Such a situation is a matter of circumstance rather than discrimination.

A dissenting judge held that although the state segregation statutes were valid, under the facts of the case the passenger, because of his color, was discriminated against in the quality or convenience of the accommodation afforded him and that inequality of treatment is prohibited by statute regardless of the type of travel. *Com. ex rel. Raney v. Carolina Coach Co. 66 SE2d 572.*

Upset Price at Receiver's Sale Given Little Weight in Valuing Transit Properties

The Massachusetts Department of Public Utilities, in determining a transit company's capital stock and investment, refused to give great weight to the upset price fixed by a Federal district court at a receiver's sale. The properties were sold at foreclosure and bid in by a bondholders' committee.

The present company obtained the properties from the committee, subject to obligations, in a reorganization plan in return for the issue of its own securities. All bonds of the new operating company went to the foreclosing bondholders, whereas all stock went to a new holding company. All bonds, as well as all stock of the new holding company, except 13 shares, also went to the foreclosing bondholders.

The transit company argued that the order authorizing it to issue securities to acquire the property conclusively decided that the property was fairly worth the amount of the securities to be issued, or, if not conclusive, the order was entitled to great weight. The department concluded that it was not bound by that determination although it could accept it. It held that the fair value of the property could not be said to have exceeded the face value of the foreclosing bonds. It so ruled in view of the fact that the holders of the bonds received securities of the new operating company and the new holding company representing the entire property received by the new operating company. Furthermore, the foreclosing bondholders also received interest in full. *Re Worcester Street R. Co. DPU 9560, November 30, 1951.*

Improper Verification Subject of Motion to Dismiss Answer

A MOTION to strike out a water company's answer to a complaint against proposed rates was granted by the Pennsylvania commission. The company's president filed the answer in the form of a letter. After signing the letter answer as president of the company, the president, at the bottom, affirmed his statement as being true and correct to the best of his knowledge. The commission held that such answer was insufficient because it was not affirmed in the form of affidavit set forth in the commission's rules of practice.

The commission pointed out, however, that the problem was purely academic because the complaint was filed a month prior to the effective date of the rates and the company had the burden of proof to show that such rates were just and reasonable, whether the answer was stricken or permitted to stand. *Bean et al. v. Noxen Water Co. Complaint Docket No. 15369, October 22, 1951.*

Commission Lacks Jurisdiction to Require Use of Abandoned Transit Facilities

THE Wisconsin commission dismissed the complaint of a county which would have required a street railway company to make use of portions of an abandoned rapid transit line of another company in providing service.

The jurisdiction of a regulatory body, the commission said, is sufficient to require a transportation company to provide adequate service within its service area but is not broad enough to permit it to provide that the abandoned facilities of a defunct company be used. *Milwaukee County v. Milwaukee Electric R. & Transport Co. 2-SR-2418, October 11, 1951.*

Other Important Rulings

THE Wisconsin commission, in authorizing telephone rates yielding a return of 6 per cent on a net book value rate base, ruled that it was proper for the company to amortize its rate case expenses over a 3-year period. *Re Niagara Teleph. Co. 2-U-3588, December 8, 1951.*

The Civil Aeronautics Board, in refusing to grant a certificate to an air carrier to operate direct service between the Bahamas and a Florida point only 25 miles from Miami, pointed out that persons wishing air transportation between such points could make use of the existing service between Miami and the Bahamas and that no community of interest between the two areas had been shown. *Re Midet Aviation Corp. Docket No. 2824 et al. September 4, 1951.*

The foreign air carrier permit of a Swiss transportation company was amended by the Civil Aeronautics Board to include a city in Western Germany as an intermediate point where air transportation to and from such city appeared to be in the public interest because of the growing community of interest between the United States and Western Germany. *Re Swissair, Swiss Air Transport Co. Docket No. 5004, October 22, 1951.*

A New York court held that the sections of the Railroad Law relating to the expense of constructing new crossings did not diminish the obligation to maintain and repair bridges built before July 1, 1897, and that the subsequent widening of a bridge built before that date, by order of the commission because of public convenience and necessity, did not relieve the railroad of its obligation to maintain the roadway and approaches. *Mount Vernon v. Feinberg et al. 106 NYS2d 532.*

The United States Court of Appeals

held that the failure of a railroad to publish an Interstate Commerce Commission order suspending demurrage rates then in effect, and providing for increased demurrage rates, did not preclude the railroad from collecting the increased amount, because the commission order related to rules, regulations, and practices which the commission was authorized to suspend with respect to railroad car services in cases of emergency. *Armour & Co. v. Louisiana Southern R. Co. 190 F2d 925.*

The South Carolina commission held that the value of an article to be transported is one of the important factors in rate making; but, in view of the competition between public carriers and between public and private carriage, what the traffic will bear in the face of competition seems largely controlling. *Re Reduced Rates on Pipe, Docket No. 7895, Order No. 8103, November 7, 1951.*

The Colorado commission denied authority for a private carrier to extend service in competition with common carriers where there was no definite proof that the public was not being adequately served and where, in the face of many protests, no customer-witnesses were produced to show a need for the proposed service. *Re Graff (Henry Graff & Sons) Application No. 11429-PP-Extension, Decision No. 37624, October 27, 1951.*

The Wisconsin commission held that proposed telephone rates that would yield a return of 6.05 per cent were fair and reasonable. *Re Somerset Home Teleph. Co. 2-U-3654, November 14, 1951.*

Titles and Index

Preprints in This Issue of Cases to Appear in PUBLIC UTILITIES REPORTS

TITLES

INDEX

Re West Jersey Telephone Company

Docket No. 5533
October 10, 1951

APPLICATION *by telephone company for Commission approval of increased rates; modified rate increase authorized.*

Valuation, § 39 — Reproduction cost.

1. Evidence of reproduction cost offered by a telephone company was given little consideration in a determination of fair value where the appraisal reflected the property as of four years earlier, with repricing being done without further inspection of plant facilities, and where the company's witness conceded that the existing plant would not be reproduced in its present form, p. 36.

Valuation, § 68 — Rate base — Acquisition price.

2. The fact that present stockholders acquired utility property at a price lower than its original cost should be given little weight in calculating a rate base when the acquisition price is not representative of the fair value of the property, p. 38.

Revenues, § 2 — Estimates for the future — Telephones.

3. Estimates by a telephone company of its future revenues were considered too low where they did not give effect to subscribers to be connected as a result of an improvement program, inasmuch as the rate base included facilities considered necessary to accelerate improvements and add subscribers, p. 38.

Return, § 26 — Equity capital — Evidence.

4. Testimony of an expert witness as to the cost of equity capital to a telephone company, which testimony was based on a comparison with companies much larger than the company under consideration, was not given much weight, because of the fact that the groupings were not basically comparable, p. 40.

Return, § 111 — Telephones.

5. A return of 6 per cent was adopted as fair and reasonable for a telephone company, p. 41.

Discrimination, § 157 — Telephone rates — Uniform exchange charges.

6. Telephone rates which would impose uniformly equal charges for the same type of services on all the exchanges of a company are discriminatory where the value of service furnished the subscribers in some exchanges is far greater than the value of service furnished to others, p. 41.

Return, § 111 — Telephones.

7. A telephone company's return of one per cent on its rate base is inadequate and a return of 9.6 per cent is excessive, p. 41.

APPEARANCES: C. Wallace Vail, for West Jersey Telephone Co.; Wesley L. Lance, for New Jersey Farm Bureau; Donald H. Kays, for Hope Chamber of Commerce; Fred W. Fuchs, Jr., for Board of Agriculture of Warren County; Keith DePuy, for Warren County Production and Marketing Committee; Samuel Tootleman, for Ox-Wall Products Manufacturing Company; Alfred Pierce, Walter Parsons, Edwin J. Lieferle, Roger F. Hicks, and Charles F. Langer, for Civic Improvement and Planning Group of Belvidere; J. A. Brown, for Mountain Lake; Louis Merians, for Oxford Liquor Store; Harry Serfass, for Agricultural Extension Service; Gilbert Hartung, for Warren County Board of Agriculture; A. Badron and Irving Sunday, for township of Oxford; Walter Parsons, for West Jersey Telephone Area Committee.

The following appeared pro se: C. Fred Lorenzo, Agricultural Agent for Warren County; Preston Owen Scharrer, and Chester Kasper.

Edward S. Binkowski, Deputy Attorney General, for Board of Public Utility Commissioners.

By the COMMISSION: West Jersey Telephone Co. (hereinafter referred to as company) filed under date of April 5, 1951, increased rates to become effective May 2, 1951. The company's filing indicated that the proposed rates were estimated to produce additional revenues of approximately $48,208 annually, based upon the number of stations in service on September 30, 1950. The Board, acting under the authority of R. S. 48:2–21, suspended the proposed rates and fixed June 6, 1951, as the date for hearing.

The Board's suspension order dated April 18, 1951, required the company to notify customers, of the company's application and of the date fixed for hearing thereon, by publication of advertisements in newspapers published and circulated in the company's service area, at least ten days prior to the date fixed for hearing. The record contains proof of compliance by the company with this requirement.

Hearings were held in this cause in the Board's offices at Newark on seven days, between June 6, 1951, and July 17, 1951. In all, eighteen witnesses testified and the record consists of 802 pages of testimony and 59 exhibits. By agreement of the parties, the company's annual reports to this Board were made a part of the record herein by reference. Memoranda were filed on behalf of the company and the New Jersey Farm Bureau.

Appearances in this cause are shown *supra*. The Board also received communications from subscribers and local organizations with respect to the quality of service and the proposed increase in rates. The essence of the testimony of subscribers and representatives of farm groups, all of which was sharply critical of the quality of service provided by the company, was that any increase granted should be predicated on an improvement in service. The general manager of the company admitted that service was inadequate.

In its petition the company alleges:

"(A) The proposed rates for exchange service would increase the telephone revenues of the company by approximately $48,208 on an annual basis for a prospective fiscal period of twelve months ended September 30, 1951, over the revenues actually de-

rived under the present rates for the fiscal period of twelve months ended September 30, 1950.

(B) The reasons for the proposed reasonable increases in rates and for asking for the proposed rates to be permitted to become effective not later than thirty days after filing of this petition, are that it is estimated that for the fiscal year ended September 30, 1950, the net income of the company would show a loss of $34,884.12 under the present rates due to increased operating expenses, including the increases in the cost of labor, materials and supplies, rentals, and interest expense, as if these expenses were in effect for the full period.

(C) In addition, the net operating income for the same period, if the present rates were in effect, and, if the increased operating expenses were experienced, would be inadequate to cover such operating expense by $28,134.12 before any provision was made for interest expense of $6,750 on the future indebtedness of the company as recently authorized by this Honorable Board of Public Utility Commissioners (Docket No. 5259). Such operating results would be detrimental to the carrying of the proposed program of capital expenditures aggregating $150,000 and upwards for the changeover from manual to dial operation in Blairstown and Great Meadows; common battery operation in Belvidere, and modified dial operation in Oxford; and for future extension and expansion of telephone service to those areas in need of such service.

(D) It is in the public interest that the company's credit be maintained and that its financial structure be unimpaired. Accordingly, it is essential that the reasonable rates petitioned for be approved and that the tariff schedule be allowed to go into effect thirty days after filing of this petition."

Under the proposed rate, schedule charges for business and residential individual and multiparty local exchange service would be increased, such charges for the service to be the same in all exchanges. The principal changes in the proposed rate schedule are summarized below: [See table on page 36.]

Description of the Company

The principal operating office of the company is located in the town of Belvidere. A Newark office is also maintained where the general books and records of the company are kept. The company supplies telephone service to the inhabitants of Warren county within an area of approximately 175 square miles in and adjacent to the towns of Belvidere, Blairstown, Great Meadows, Hope, and Oxford, each of which is designated as a local exchange. The company's service area extends into adjoining territory in the commonwealth of Pennsylvania. The company serves approximately 1,500 subscribers in New Jersey and approximately 30 in Pennsylvania.

While, at present, the company operates a magneto system, it has begun a program to convert to common battery with dial operation which will be made available in some of its exchanges. This program contemplates installation of a community dial in the Blairstown and Great Meadows exchanges and a conversion to RCX (i.e., unattended, remote control exchange) in the Hope and Oxford exchanges. The Belvidere exchange is

	Present Monthly Exchange Rate Schedule					Proposed Rate Schedule
	Belvidere	Blairstown	Great Meadows	Hope	Oxford	
Residence Town						
Individual	3.00	3.50	3.50	2.75	3.00	6.50
Multiparty desk ...	1.50	2.50	2.50	2.50	2.00	4.50
Multiparty wall ...	1.50	2.00	1.50	2.00	1.50	4.50
Residence Country						
Individual	3.00	3.50	3.50	2.75	3.00	6.50*
Multiparty desk ...	2.00	2.50	2.00	2.50	2.50	4.50
Multiparty wall ...	1.50	2.00	1.50	2.00	1.50	4.50
Business Town						
Individual	4.00	3.75	4.00	3.00	4.00	7.50
Multiparty desk ...	2.50	2.75	2.50	2.50	2.50	5.50
Multiparty wall ...	2.50	2.75	2.00	2.50	2.00	5.50
Business Country						
Individual	4.00	3.75	4.00	3.00	4.00	7.50*
Multiparty desk ...	3.00	3.25	2.50	2.50	2.50	5.50
Multiparty wall ...	2.50	2.75	2.00	2.50	2.00	5.50

* The individual line rates shown above apply plus exchange line mileage charges of $2.00 per one-half (1/2) mile or fraction thereof, route measurement.

A. Extra business directory listings to be increased from 25¢ to 40¢ per month.

B. Semipublic telephones to be charged at the applicable business rate, plus $1.50 per month.

C. PBX nonmultiple 80 station lines and 15 trunks, $20.00 per month.

to be moved to larger quarters and additional operating facilities provided.

Operator requirements for Blairstown, Hope, and Oxford will be handled through the Belvidere exchange, while the Great Meadows operator requirements will be met by the Washington exchange of the New Jersey Bell Telephone Company.

At present, the toll business originating from the Blairstown exchange is operated through the Easton exchange of the Pennsylvania Bell Telephone Company. Upon completion of additional facilities at the Belvidere exchange, this toll business will be handled by the Belvidere exchange of the company.

A portion of the toll business currently originating in the Great Meadows exchange is operated locally; however, upon conversion of this exchange to dial, all the toll business of the said Great Meadows exchange will be done by the Washington exchange of the New Jersey Bell Telephone Company.

The aforementioned improvement program also calls for changes and additions in pole line, wire, and cable plant.

While some inconsistencies appear, the record indicates that, barring unforeseen difficulties in obtaining the required materials and equipment, this program of improvements is expected to be completed substantially by December 31, 1951.

The Board is of the opinion that improved service to the present subscribers should result from this proposed plan of improvements; it should also enable the company to provide service to additional subscribers. Having accepted the company's prediction as to the completion of the program of improvements, this Board shall require the company to make periodic reports concerning the progress it is making.

Rate Base

[1] The company submitted evidences of rate base by presenting ex-

hibits reflecting its balance sheets and a cost of reproduction appraisal.

The reproduction appraisal was prepared by Allen K. Hamilton, a consulting engineer. The appraisal prepared by Mr. Hamilton, while he was a partner with Cyrus G. Hill, reflected the property existing at December 31, 1947. For the purpose of this case, the items of property in that appraisal were stated at December 31, 1950, price levels. This repricing was done by the witness without further inspection of the plant facilities. No adjustment for depreciation was made by Mr. Hamilton of the amount shown by him in the 1947 appraisal.

The witness was asked whether he would, in fact, reproduce the existing plant in its present form, namely, as a magneto system, with all its attendant inefficiencies, and he testified that he would not. The witness further stated that he was familiar with the company's present improvement program and that it was substantially in accord with a report he had submitted to the company at the time he made the 1947 appraisal.

The Board is here confronted with an appraisal representing plant not capable of rendering adequate and proper service, while the improvement program now in progress will have the effect of eliminating portions of the existing facilities. As heretofore indicated, Mr. Hamilton applied 1950 prices to the 1947 inventory. Adjustments to reflect net plant additions were made by another witness in Exhibit P–14 to bring the data to September 30, 1950, and in Exhibit P–21 to March 31, 1951. However, the net additions subsequent to 1947 were taken from the books, stated at original cost, and do not show retirements at appraisal figures.

The Board is of the opinion that under all of these circumstances, the evidence with respect to the reproduction appraisal is entitled to but little consideration in our determination of the fair value of the company's property.

The only other type of rate base evidence presented by the company is that shown in the balance sheets and the exhibits reflecting the company's improvement program. The evidence indicates that the fixed capital accounts are recorded at original cost and that the company does not charge interest during construction. Under present arrangements service is billed after it is rendered. Accordingly, in this case we will give consideration to an amount for telephone plant under construction and to an allowance for working capital. In accordance with our usual practice we will allow a reasonable amount for materials and supplies. Witness Sewek, on behalf of the company, estimated the cash working capital requirements at $10,000 and materials and supplies at $5,000. Both of these amounts appear to be reasonable and we will adopt these amounts for rate base purposes.

The latest actual balance sheet in evidence is dated June 30, 1951, and only reflects a portion of the improvement program estimated to be completed during this year. On the basis of the record in this case, the Board will adopt for rate case purposes, the date of December 31, 1951, by which time the company estimates that the major part of the program will be completed. The company presented Exhibit P–46, a pro forma balance

sheet at December 31, 1951, from which we can calculate a rate base representative of the fair value of the company's property.

[2] We have considered that the company's property was acquired by present stockholders at a price lower than original cost, but have given this fact little weight in our calculation of rate base, inasmuch as it is not representative of the fair value of the property under the circumstances herein.

For the reasons expressed *supra,* we will adopt $343,716 for the purpose of this decision as the rate base for the company, calculated as follows:

Telephone Plant in Service	$340,447
Telephone Plant under Construction	23,990
Materials and Supplies	5,000
Cash Working Capital	10,000
Total Investment	$379,437
Less:	
Depreciation Reserve	35,721
Rate Base	$343,716

Operating Expenses

The company submitted income statements, summarized below, taken from its books of accounts:

	Six Months Ended 6/30/51	Twelve Months Ended 3/31/51	Twelve Months Ended 12/31/50
Operating Revenues	$56,372	$111,657	$108,952
Operating Revenue Deductions	54,895	107,091	105,083
Operating Income	$1,477	$4,566	$3,869

The record contains an explanation of the method and the manner of computation and amounts of all items reflected in the company's books with respect to its revenues and expenses. Details with respect to revenues, salaries, wages, supplies, taxes, and depreciation were the subject of direct and cross-examination. Our staff has examined the company's books and records, not only for the purpose of determining the accuracy of the figures shown in its annual reports filed with the Board, but also to obtain data related to original cost studies, depreciation requirements, and security issues.

[3] The company submitted pro forma income statements designed to show its future level of revenues and expenses. The record shows that the company's level of revenues is constantly increasing and that it presently has a waiting list of prospective subscribers. Some consideration was given by the company to subscribers that may be connected in the last half of 1951, but inasmuch as the rate base herein allowed includes facilities that are considered necessary to accelerate the addition of subscribers, the estimate of the future level of revenues is considered to be too low because it does not give effect to the subscribers to be connected as a result of the improvement program. The pro forma income statements showed that the greatest anticipated increase in expenses will be wages; the increased payroll resulting from hiring additional personnel which the company claims it requires, as well as proposed increased wage scales to be paid in the various present employee classifications. The company claims that there are two major groups of

employees to be added to its payroll, viz., telephone operators and linemen. The company has given effect to additional operators at its Belvidere exchange, but fails to consider that there will be a reduction in its operator requirements when the other exchanges are mechanized, in accordance with the company's present improvement program. In the case of linemen, the company based its future need upon past maintenance requirements related to the then existing plant. The improvement program will require linemen for construction work which is not chargeable to maintenance expenses.

As to the increased level of wages, such increases actually had not been granted by June 25, 1951. C. Wallace Vail, general manager of the company, testified that he did not know when such wage increases would be given nor the amount of such increases.

Another item of increased expense in the company's pro forma income statements is for materials used in its operations. Most of the materials included in expenses are for maintenance work. The new and improved equipment should reduce the amount of materials required and offset the increased cost of such materials.

The amount of officers' salaries and expenses, the reasons for the Newark office and its expenses, and rentals paid to stockholders were the subjects of extensive cross-examination. It was developed by this examination that these expenses are determined by the stockholders themselves and these amounts constitute a substantial part of total operating expenses. We are required to determine that the amount of operating expenses is reasonable.

The memorandum filed on behalf of the New Jersey Farm Bureau states (page 5):

". . . a rate-making board should scrutinize these transactions carefully for the purpose of determining where reasonable and adequate compensation ends, and the payment of stock dividends begins."

In our determination of the amount of reasonable operating expenses to be allowed we must consider the level and amount of future operating expenses. As heretofore indicated, such expenses will be related to different operating conditions resulting from the improvement program. Hence, the number of employees, the amount of maintenance, and the amount of controllable expenses (rent, officers' salaries, etc.) cannot be determined on the basis of past experience. Another factor is that 1950 expenses include costs associated with the windstorm in November, which expenses are not recurring.

For all of the foregoing reasons, including the failure to give effect to the economies and efficiencies which should result from the improvement program, the Board cannot adopt the company's estimate of expenses. The pro forma income statements in evidence in this case reflect a level of expenses which cannot be used, and hence we must find from the record evidence which will enable us to ascertain a fair and reasonable amount of operating expenses which the company will experience in a reasonably future period.

The income statement for the first six months of 1951 shows an operating income of $1,477. Based upon that exhibit and giving consideration to

what has been said previously regarding increased revenues and increased and decreased expenses, we conclude that present rates would produce an operating income of approximately $3,000 per annum after the improvement program is completed. We have considered this program in determining the rate base. This is equivalent to less than one per cent on the rate base of $343,716 previously indicated.

Rate of Return

[4] As to the rate of return, the company produced William E. Stiegelmeier as its witness. Mr. Stiegelmeier is a member of the firm of Hammond and Stiegelmeier, of Chicago, Illinois, consultants in the field of public utility rates and finance. Mr. Stiegelmeier testified that the "over-all average cost of capital is 8.5 per cent" and concluded that the company ". . . should be allowed a rate of return of 8½ per cent upon the fair value of its property."

Apparently the company does not accept the opinion of its expert completely for it states on page 7 of its memorandum: "If only a reasonable rate of return of 8 per cent were applied to this rate base, it would produce operating income of $28,617.70 as being a fair and reasonable return on property used and useful in furnishing public service."

Mr. Stiegelmeier concluded that a capitalization ratio of 40 per cent debt and 60 per cent equity was reasonable at an over-all cost of 4.75 per cent for debt and 11 per cent for equity. It is noted that the witness did not include any preferred stock in capitalization although 15 of the 20 companies shown in Exhibit P–24 have such issues. The ratios shown on Exhibit P–24 are 43 per cent debt, 15 per cent preferred, and 42 per cent common equity. Inasmuch as preferred stock is issued at substantially lower rates than common stock, the omission of preferred stock from a capitalization ratio has the effect of increasing the over-all cost of capital. The 20 companies shown on Exhibit P–24 are described by Mr. Stiegelmeier as ". . . those companies which have as nearly as possible the corresponding risks and uncertainties as the West Jersey Telephone Co."

Mr. Stiegelmeier's calculation of 4.75 per cent for debt capital is based upon general considerations applicable to a large group of companies as well as his statement that: "After checking with a number of reliable sources, it is my opinion that the West Jersey Telephone Co. could not obtain long-term credit at the present time at less than 5 per cent interest." The "reliable sources" were not identified by the witness. Mr. Stiegelmeier testified that the company's recent issue of $150,000 of mortgage bonds bears interest at the rate of 4½ per cent per year and that the cost of issuing the bonds increases the cost of debt capital about .12 per cent per annum.

Mr. Stiegelmeier's calculation of 11 per cent as the cost of equity capital was ". . . determined by a study of similar equity issues." However, his comparisons are with the average of 125 industrial company common stocks and 24 leading electric and gas utilities, both of which lists are published by Moody's Investor Service and with the list of 20 companies shown in Exhibit P–24 which Mr. Stiegelmeier characterized as ". . .

all much larger than the West Jersey Telephone Co."

Therefore, we do not consider that any of these groupings are basically comparable with the West Jersey Telephone Co., and conclude that Mr. Stiegelmeier's testimony on the return on equity capital is entitled to very little weight.

The company had no plans for the issuance of additional equity securities, but stated that it would require additional financing. It has also indicated that it is presently considering a loan from the Rural Electrification Administration. Such loans can be made at an interest rate of less than 3 per cent per annum. However, the testimony indicates that although there was opportunity to obtain Rural Electrification Administration loans, the company did not complete the action required to secure such loan.

[5] We have based our conclusion as to a fair rate of return upon all of the foregoing and upon our general information as to the cost of obtaining capital for enterprises of comparable risks and characteristics. We have also given consideration to the nature of the territory served, the character of service to be rendered, the requirements of financing its improvement program and other unique aspects of this company's ownership and operation and, therefore, we will adopt 6 per cent as a fair and reasonable rate of return.

Rates

[6] In its schedule of proposed rates the company contemplates ". . . increases in rates for business and residential individual and multiparty exchange service, and also adjusted rates so that the resulting charges are uniformly equal for the same type of services for all exchanges." If such "uniformity" were approved by the Board, it would result in the subscribers in an exchange area such as the Hope exchange being required to pay the same amount for local exchange service as subscribers in the Belvidere exchange area. The subscribers in the Hope exchange are limited to approximately 113 station numbers which they may call without additional charge, while those in the Belvidere exchange may call approximately 800 station numbers without a toll charge. It does not appear that the value of service furnished to subscribers in the Hope exchange is comparable to the value of service furnished to Belvidere subscribers. The company did not submit studies of the cost to provide service in each exchange. A differential in the charge for local exchange service is recognized in the present rates.

It is the Board's opinion that the rates proposed by the company are discriminatory and we will require the company to establish rates which will eliminate all discrimination.

Conclusions

[7] As previously indicated, the rate of return under present rates would be less than one per cent. In the opinion of the Board such a rate of return is inadequate, therefore, the present rates are unjust and unreasonable in that they fail to afford an opportunity to earn a fair return on the fair value of the company's property used and useful to render telephone service.

The company estimates that the pro-

posed rates are expected to produce additional annual revenues of approximately $49,000. We have previously indicated that this is a minimum figure. Adjusting for taxes and considering the $3,000 of operating income estimated under present rates, the operating income, under the rates proposed by the company and at the estimated level of expenses, would become approximately $33,000. This amount, when related to the rate base herein adopted, is equivalent to a rate of return of 9.6 per cent. In the opinion of the Board such a rate of return is excessive.

It is our opinion that the company is entitled to some increase in rates, but not as large as that proposed by it. The following schedule indicates the amount of additional revenue required to yield a rate of return of 6 per cent on the rate base adopted herein:

1. Amount of return equivalent to 6% of adopted rate base	$20,623
2. Estimated operating income under present rates	$3,000
3. Indicated return deficiency	$17,623
4. Amount of additional revenue required to recover return deficiency, adjusted to give effect to related additional franchise and Federal income taxes	$23,977

The company has submitted a statement purporting to show the net original cost of its property in Pennsylvania ($3,612) at December 31, 1950. The operating revenues from the Pennsylvania operations for the year 1950 are shown as $1,639. However, this statement does not show the basis of the above allocation, nor the amount of materials and supplies and cash working capital related to the Pennsylvania operations.

As the company serves both New Jersey and Pennsylvania customers, it would be unreasonable to require only the New Jersey customers to stand the full effect of the return deficiency. In the absence of a more comprehensive separation study and inasmuch as 98 per cent of the customers are located in New Jersey and a like percentage of the local exchange revenues are realized from those customers, it is reasonable that the amount of the increased revenue to be borne by the New Jersey customers should be 98 per cent of $23,977 or $23,497.

On the basis of the foregoing considerations, the Board finds and determines:

(1) That the existing schedule of rates is unjust and unreasonable in that it does not afford the company an opportunity to earn a fair return.

(2) That the rates proposed by the company are discriminatory, unjust, and unreasonable and would yield an excessive return, and that such rates are, therefore, *hereby disapproved.*

(3) That a schedule of rates which will increase annual operating revenues from New Jersey customers on the basis of the estimated number of stations in service at December 31, 1951, by $23,497 is just and reasonable.

(4) That the company shall submit for the consideration of the Board, within fifteen days of the date of this decision, a revised schedule of nondiscriminatory rates so designed as to produce an increase in annual operating revenues of not more than $23,497, as more particularly set forth in paragraph (3) above. This revised schedule of rates is to become effective with bills rendered in the ordinary course of business on and after December 1, 1951.

The authority herein granted is subject to the condition that the company submit monthly reports on the progress of its improvement program as well as detailed information on what is being done to render better service. These reports are to be submitted not later than the 15th day of the succeeding month and until permission is obtained for their discontinuance.

MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES

Re Berkshire Street Railway Company

D. P. U. 9119
September 14, 1951

HEARING *on order to show cause why transit company should not be ordered to eliminate its surplus deficit; proceedings terminated.*

Security issues, § 20 — Commission powers — Changes in par value of stock.

1. The Commission has no authority to require a transit company to decrease the par value of its common stock and to transfer a large portion of its capital account to surplus in order to eliminate a surplus deficit, although it does have power to give or withhold its approval of such action upon application of the corporation, p. 43.

Commissions, § 17 — Powers — Statutory limitations.

2. The Commission has only such powers as are delegated to it by statute, although the grant of such powers may be broadly construed, p. 44.

APPEARANCES: Edwin J Moore, for the Berkshire Street Railway Company; Francis J. Quirico, City Solicitor, city of Pittsfield.

By the DEPARTMENT: In our order of February 2, 1951, 88 PUR NS 21, in the above matter, we ordered the Berkshire Street Railway Company to show cause at a public hearing, to be held on March 15, 1951, why it should not be ordered to take the steps necessary in order to eliminate its existing surplus deficit. After some adjournment this hearing was held on April 17, 1951, and the company went into some detail as to the reasons which compelled it to maintain its existing capital structure.

[1] As we pointed out in our findings, this carrier states its common stock account at $5,398,100. It shows a surplus deficit of $5,345,578.82 as of July 31, 1950. We pointed out in our findings that we felt this company should revise its balance sheet to reflect more accurately its financial position. In order to do this, it would be necessary for the company to decrease the par value of its common stock and transfer a very large portion of its capital account to surplus. In view of the fact that there are outstanding bonds

in the total amount, as of July 31, 1950, of $387,600, it would be limited as to such revision to a 50 per cent debt ratio. See G. L. Chap 161, § 28.

However desirable such a step might appear in our eyes, we are of the opinion that we have no power to compel the company to take such steps. The statute gives us wide powers of supervision over its capital structure and requires the company to obtain our approval before making any substantial changes therein. But there is a substantial difference, on the one hand, between such supervisory power and the plenary power which is granted us in the statutes over the rates, practices, and operations of the company and, on the other hand, the power to compel the corporation to take the affirmative action necessary in order to decrease the par value of its securities. Such changes must stem from the action of the stockholders and directors and these actions are peculiarly within their functions. We are of the opinion that the only power which the Department has in relation thereto is to give or withhold its approval upon application of the corporation.

[2] A review of the pertinent sections of Chaps 159, 159A, and 161 of the General Laws fails to show the existence of any power beyond this. We believe it to be axiomatic that we exercise only those powers delegated to us by the legislature although such grant of powers may be broadly construed. Where we see no grant of powers whatever, obviously, we cannot act, however much we feel that such action would be in the public interest.

For the foregoing reasons, after public hearing, investigation and consideration, it is hereby

Ordered: That the proceedings in D. P. U. 9119 initiated by order to show cause contained in our order of February 2, 1951, *supra*, be and the same are hereby terminated and closed.

SECURITIES AND EXCHANGE COMMISSION

Re The United Corporation

File No. 54-158, Release No. 10786
September 27, 1951

OBJECTION *to participation by two Commissioners in holding company reorganization proceedings; objection overruled.*

Commissions, § 51 — Disqualification of Commissioners — Effect of response to public charges.

The exercise by an administrative agency of its public responsibilities to respond to public charges respecting its administration cannot disqualify the agency or its members from continuing to exercise their quasi judicial functions with respect to matters which may have a relationship to the subject matter of public discussion.

By the COMMISSION: Randolph Phillips, who has filed an application for allowance of fees and reimbursement of expenses in these proceedings and has raised objections with respect to certain fees and expenses sought by other applicants, has filed an affidavit of personal bias or disqualification objecting to the participation in the decision in these proceedings of Chairman McDonald and Commissioner Millonzi.

The affidavit makes no claim that either of the challenged Commissioners has any personal interest in the case, or any personal relationship to any of the participants in the proceedings, but is based upon objection to prior action taken in their respective capacities as Chairman and as a member of this Commission.[1] It is based primarily upon statements made by the Commission in a release to the press dated August 20, 1951, and by the Chairman in a letter to a newspaper, copies of which documents are attached as exhibits to the affidavit.[2] The release and letter were in response to reports that had been published and made the subject of newspaper editorial comment, that a congressional investigation had been ordered with respect to the Commission's alleged favored treatment of The United Corporation ("United"), in administrative proceedings relating to its compliance with the requirements of the Public Utility Holding Company Act of 1935.

The challenged Commissioners and the Commission as a whole, to which those Commissioners have voluntarily submitted the affidavit, are of the opinion that no basis for disqualification has been shown.[3]

The statements complained of in the affidavit were issued pursuant to the authority of the entire Commission.[4]

[1] While the affidavit also asserts that the other three members of the Commission are disqualified by virtue of their participation in the same action that is made the basis for challenging these two Commissioners, it states that no motion for the disqualification of such members is made because necessity requires that a quorum of the Commission remain to render a decision in these proceedings.

[2] The affidavit also asserts that bias is evidenced by the Chairman's denial of Phillips' request in general terms for copies of the press release and letter and of any other documents which might indicate bias and by the failure of the Chairman to deny that there exists documents that show personal bias or hostility to him. We know of no requirement or warrant for a procedure under which a litigant may secure discovery or production of documents or information from members of a tribunal in order to develop a charge of bias against them. We denied a similar request in Otis & Co., Securities Exchange Act Release No. 4419, and we find no basis for granting of the request made here. The failure to disclaim the existence of or undertake to identify any documents reflecting a point of view which Phillips might interpret as bias was consistent with the proper denial of the request.

[3] Although the affidavit recites that it is filed pursuant to § 7(a) of the Administrative Procedure Act, 5 USCA § 1006(a) under which the agency passes upon affidavits of bias, we note that that section by its terms applies only to charges of bias directed against officers who preside at the taking of evidence and other officers who recommend or otherwise participate in decisions under § 8 of that act, 5 USCA § 1007, and does not relate to charges of bias against members of the Commission acting in their quasi-judicial capacity. This view of the section is supported by its legislative history. See S. Rep. No. 752, 79th Cong. 1st Sess. (1946) 21; H.R. Rep. No. 1980, 79th Cong. 2nd Sess. (1946) 34, 35. We have held that this Commission does not have the authority to rule upon the qualification of its members, and that each individual member must determine his own qualification. Re Otis & Co. (1950) Securities Exchange Act Release No. 4419 (page 3). However, this does not of course preclude the Commission from considering such a question at the request of individual Commissioners whose qualification has been challenged.

[4] The Chairman is generally authorized to make appropriate public statements on behalf of the entire Commission on matters of administration of the type involved. Phillips' selection of the Chairman as a subject for disqualification on the ground that his letter indicates his personal bias is thus not warranted.

These statements were made in the discharge of what this Commission considers to be its responsibility as an agency accountable to the Congress, and ultimately to the public, to respond promptly to charges affecting the integrity of its administration. In our opinion the publicized charges made were of a nature to cause unwarranted doubt and uncertainty in the minds of the public, Congress and the investors in United as to the integrity of our processes and our decisions with respect to that corporation. These charges appeared to us to be based upon a misconception concerning prior proceedings and decisions relating to that corporation, many of which were unsuccessfully challenged in the courts by Phillips, and we understood that he was the source of this misconception. Our response to the charges accordingly contained a description of the essential features of the United proceedings and of Phillips' connection with them. The affidavit does not dispute that Phillips was in fact responsible for giving currency to statements concerning this Commission in form closely similar to those to which we replied, but makes a variety of objections to the contents of the press release and letter, principally that our statements omitted to set forth various matters which he considers reflect favorably upon him and which he thinks should have been mentioned.

It is obvious that the exercise by and administrative agency of its public responsibilities to respond to public charges respecting its administration cannot disqualify the agency from continuing to exercise its quasi-judicial functions with respect to matters which may have a relationship to the subject matter of public discussion. To hold otherwise would be to limit the agency's freedom to carry out its public responsibilities in both respects.

As has been noted, the statements of which the affidavit complains recite uncontrovertible facts concerning certain unsuccessful steps taken by Phillips in connection with the United proceedings, but they do not, and were not intended in any way to, imply whether or not his activities in those proceedings bore such a relation to the reorganization as to be compensable from the reorganization estate. The issues we are to decide in these proceedings relating to his application and those of the other persons seeking fees and expenses will be considered and determined on their merits on the basis of the record and arguments before us and in accordance with the legal principles respecting compensation and reimbursement of expenses that are applicable to reorganizations under the act.

After full consideration, it is the conclusion of the challenged Commissioners, as well as of the entire Commission, that the charge of disqualification is wholly without basis. While the issues to be decided in connection with the instant fee applications are of a relatively limited nature and might readily be disposed of by the other three Commissioners, and while it is

Nor does any valid basis appear for the selection for exclusion of Commissioner Millonzi. The charge of personal bias on his part is rested primarily on the fact that he became a member of this Commission subsequent to the last decision rendered by us with respect to United. The affidavit asserts that he must have been prejudiced in joining in the statement to the press since he had no personal administrative experience and familiarity with the matters referred to therein.

naturally distasteful to participate in a decision after having been charged with bias, we believe that public officials should not step aside from the discharge of the responsibility inherent in their positions in response to the type of objection here made.

Accordingly, it is *ordered* that the objections of Randolph Phillips to the participation in the decision of these proceedings by Chairman McDonald and Commissioner Millonzi be, and they hereby are, overruled and his motion that they be disqualified be, and it hereby is, denied.

WISCONSIN PUBLIC SERVICE COMMISSION

Re Commonwealth Telephone Company

2-U-3608
September 21, 1951

APPLICATION *by telephone company for authority to discontinue unlimited interexchange service; granted.*

Rates, § 573 — Telephone — Free interexchange service.

A telephone company was authorized to discontinue unlimited interexchange service between certain exchanges where it appeared preferential and unjustly discriminatory to burden the greater number of subscribers who did not use such service with the cost of maintaining that service for the few who did use it.

By the COMMISSION: The Commonwealth Telephone Company, Madison, on June 14, 1951, filed an application with the Commission for authority to discontinue unlimited interexchange service from its Dalton and Kingston exchanges to the Cambria exchange of the Peoples Telephone Company.

APPEARANCES: Commonwealth Telephone Company, by Walter Wellman, Commercial Engineer; of the Commission staff: W. H. Evans, rates and research department.

Findings of Evidentiary Facts

The Commission finds the essential evidentiary facts herein to be the following:

The Commonwealth Telephone Company maintains the exchanges at Dalton and Kingston in Green Lake county. The Dalton exchange is approximately 10 airline miles and the Kingston exchange is approximately 11 airline miles from Cambria. Unlimited interexchange service is rendered to subscribers of the Dalton and Kingston exchanges over a grounded circuit terminating at the Cambria exchange. The grounded circuit is jointly owned by the Commonwealth Telephone Company and the Peoples Telephone Company. The Peoples

Telephone Company charges the standard intrastate toll rate for messages originating at Cambria and destined for Dalton or Kingston.

The Commonwealth Telephone Company wishes to discontinue the unlimited interexchange service because to render adequate service on the present lines would require the rebuilding of the grounded facilities, and because the use of such service does not warrant the cost of rebuilding and maintaining the circuit.

From May 28, 1951, to June 2, 1951, only 7.4 per cent of the Dalton subscribers and 13.2 per cent of the Kingston subscribers made use of the service. It appears preferential and unjustly discriminatory to burden the greater number of subscribers who do not use the unlimited interexchange service to Cambria with the cost of maintaining that service for the few who do use it.

Findings of Ultimate Fact

The Commission finds:

That the present practice of permitting subscribers of the Dalton and Kingston exchanges of the Commonwealth Telephone Company to call subscribers of the Cambria exchange without toll charge is preferential and unjustly discriminatory and places an unreasonable cost burden on the majority of the subscribers of the Dalton and Kingston exchanges who do not use the service.

The Commission concludes:

That it has jurisdiction under §§ 196.03 and 196.37, Statutes, to enter an order granting the request to discontinue unlimited interexchange service from the Kingston and Dalton exchanges to the Cambria exchange and that such order should be entered.

ORDER

It is therefore *ordered*:

That the Commonwealth Telephone Company withdraw its present arrangement permitting unlimited interexchange service to Cambria from its Dalton and Kingston exchanges and substitute therefor, effective November 1, 1951, concurrence in the intrastate toll rates of the Wisconsin Telephone Company for such toll traffic.

WISCONSIN PUBLIC SERVICE COMMISSION

Re Lake Superior District Power Company

2-U-2800
September 28, 1951

APPLICATION *of power company for authority to increase rates; rate increase authorized.*

Service, § 190 — Connection cost — Customer contributions — Refund provisions.

1. An electric utility may properly require new customers to advance a part, or all, of the cost of connections where there is a questionable business risk, and it may provide for refunds if the venture proves stable, p. 50.

RE LAKE SUPERIOR DISTRICT POWER CO.

Service, § 138 — Electrically operated water heaters — Size of unit as basis for service refusal.

2. An electric utility should be permitted to refuse service to electrically operated water heaters which do not meet its requirements as to size, p. 50.

Expenses, § 114 — Federal income tax — Anticipated increase.

3. Allowance was made for Federal income taxes based upon an anticipated increase in the tax rate from 47 per cent to 52 per cent, retroactive at least to the end of the first quarter of the current year, p. 50.

Return, § 87 — Electric utility.

4. A return of approximately 6.1 per cent was considered fair and reasonable for an electric utility, p. 50.

By the COMMISSION: As the result of an application on July 30, 1948, by the Lake Superior District Power Company, this Commission issued an interlocutory order on September 29, 1948, authorizing certain increases in electric rates. Supplemental orders were issued on November 9, 1948, and December 11, 1948, authorizing increases in rates not covered by the September 29, 1948, order. Jurisdiction was retained, and the September 29, 1948, order, which authorized the temporary increase in rates, specified that "such rates shall remain in effect for a temporary period pending further order of the Commission in this proceeding providing for other temporary rates or permanent rates." The order also required the Lake Superior District Power Company to submit bimonthly reports of generation, sales, revenues, and expenses.

Following the issuance of the orders a study was initiated to allocate costs between different classes of customers served by the Lake Superior District Power Company. Such study was completed, information submitted by the utility analyzed, and a notice of further hearing issued June 22, 1951.

Hearing was held at Madison on July 26, 1951 before examiner Samuel Bryan.

APPEARANCES: George A. Donald, President, and Glen H. Bell, Attorney, for Lake Superior District Power Company; Arthur Habeck, Manager, and Louis Charles, City Attorney, for city of Medford Municipal Electric Utility; Arvid Wentela, Manager, and Floyd Wheeler, Attorney, for Bayfield Electric Cooperative; Floyd Wheeler, Attorney, for Price Electric Cooperative and Dairyland Power Cooperative.

Of the Commission staff: R. E. Purucker, engineering department.

Findings of Evidentiary Fact

The Commission finds the essential evidentiary facts herein to be the following:

The Lake Superior District Power Company is a public utility which, as one of its public undertakings, furnishes electric service to approximately 11,763 residential, 3,286 commercial, 3,965 rural, 3,903 water heating, and 325 power, and other types of customers in 113 towns, villages, and cities in 12 counties in northern Wisconsin. It also renders electric service in northern Michigan.

The utility has a growing load and increasing expense and is engaged in a sizable construction program which is necessary to provide satisfactory service.

The utility's present rate of growth, present expense levels, and committed property and plant additions are proper factors to be considered in the establishment of rates.

The utility plant cost as of the middle of the year 1951 including one-half the estimated cost of additions during 1951, plus a $167,919 allowance for material and supplies, a $275,000 allowance for working capital, minus contributions and advances in aid of construction is $19,337,923.

The utility depreciation reserve as of the midyear of 1951 adjusted to include estimated retirements and added accumulations resulting from changes in property and plant is $3,562,454.

The utility revenue for a 12-month period is reasonably estimated to be $5,139,327 based on present rate levels and on 1951 rates of growth of customers and use.

The utility expenses for a year based on the present rate of expenditures adjusted to reflect the increased efficiency of new facilities included in property and plant, depreciation of added property and plant, latest labor and material costs, and taxes based on a revenue of $5,139,327, is $4,094,820.

In summary, the base figures from which a rate of return is calculated and the rate of return based on such figures is:

Property and plant, working capital, materials, and supplies	$19,337,923
Depreciation reserve	3,562,454
Rate Base	$15,775,469
Revenue at present rates	5,139,327
Expenses, taxes, and depreciation	4,094,820
Net	$1,044,507

$$\text{Rate of return} \frac{1,044,507}{15,775,469} = 6.62\%$$

[1-4] Studies of: (a) the rates of return by classes of customers shown by the detailed cost allocation (b) rate forms, (c) classifications of communities, (d) predicted operations, (e) plant additions, (f) estimated earnings, and (g) predicted sales show that it is desirable to:

1. Lower the rate of return.

2. Use directly quoted new rate instead of surcharge percentages.

3. Reduce the number of residential community classifications from three to two by combining the present group 2 communities with the group one communities.

4. Eliminate the present commercial power rate and include the usage in the general commercial-service rate. The general commercial-service rate will be available for both single- or 3-phase service at primary or secondary voltages.

5. Eliminate the commercial heating and cooking rate and allow the heating and cooking consumption to be combined with the commercial use and billed at the general commercial rate.

6. Use the same commercial rates for group 2 and rural commercial customers.

7. Introduce a new schedule for athletic field lighting.

8. Introduce a temporary service rate.

9. Introduce a supplementary power service rate.

10. Introduce a new industrial power rate for service at 33,000 volts or higher. The present large-power rate is to remain as an optional rate for existing customers, and approximately three years are to be allowed to transfer customers from the existing to the new rate.

11. Change the fuel clause in the Northern Wisconsin Power Company's contract to the standard fuel clause by filing it as optional and allowing time to transfer the customer to the new rate.

12. Place the Medford resale rate on a permanent basis.

13. Increase the reconnection charges from one dollar for urban, $2.50 for rural, and $3 for power to $2, $3, and $4, respectively.

14. Extend the urban extension rules to rural areas adjacent to urban areas.

15. Discontinue supplying that part of a wiring system known as service entrance conductors between the first attachment on the building to the meter.

16. Apply rural extension rules inside urban areas where such application benefits the customer.

17. Introduce a new minimum providing if the transformer required for residential service is 7.5 kilovolt amperes or more the minimum will be $1.25 per kilovolt ampere each month for each kilovolt ampere required in excess of 5 kilovolt amperes.

18. Provide for new customers advancing a part or all of the cost of connection where there is a questionable business risk with refund provisions applicable in case the venture proves stable.

19. Provide rules for the connection of welders.

20. Revise the water-heater rules to permit refusal of service to heaters not meeting the company's requirements as to size.

21. Increase the extension cost in excess of the free limits from 20 cents to 25 cents a foot for street-lighting, rural, and seasonal service.

22. Change the street-lighting rates to require a minimum of three lights on any contract and three lights for each time clock.

23. Require prospective customers who sign for an extension to make a two month's deposit at the time of signing for the extension.

24. Rural and seasonal rates and extension policies are to be equalized, and the minimums are to be placed on an annual basis with the customer given the choice of the number of months he will use the service each year.

25. Change the seasonal service rate to provide that the water-heating minimum be added to the other minimum as is done in the case of rural service.

The above-listed changes in rates, and their application are incorporated in the appendix attached to this order. [Appendix omitted herein.]

When they are applied, the changes in rates and their application in the appendix will result in a net yearly decrease in Wisconsin revenue of $36,787, a $6,815 decrease in revenue in Michigan, or a total net decrease of $43,602.

The changes in rates produce some

increases as well as some decreases. In one month the change in rates will effect bills as follows:

Class of Service	No. of Bills Increased	No. of Bills Reduced
Residential	3,020	8,813
Rural	1,325	2,826
Commercial	523	2,741
	4,868	14,390

The application of the new rates in the appendix will result in an operating revenue of $5,095,725. The rate of return will be:

Revenue at proposed rates	$5,095,725
Expenses, taxes, and depreciation	4,073,220
Net	$1,022,505

$$\text{Rate of return } \frac{1,022,505}{15,775,469} = 6.48\%$$

The foregoing calculations as to rate of return are based on income taxes presently effective. Based upon action of Congress to date, it is a practical certainty that the Federal income tax rate will be increased from 47 per cent to 52 per cent and that it will be retroactive for this year to at least April 1st. With a 52 per cent Federal income tax rate the rate of return would be reduced to approximately 6.10 per cent, which rate of return appears to be probable for the immediate future.

The Michigan Public Service Commission which co-operated in the cost analyses has already ordered the company to make rate changes in Michigan which conform generally to the changes authorized herein.

The investigation of the Lake Superior District Power Company is completed.

Findings of Ultimate Fact

The Commission finds:

1. That the existing electric rates of the Lake Superior District Power Company are unreasonable.

2. That $15,775,469 constitutes a reasonable and proper base for electric rate-making purposes.

3. That the rates in the attached appendix [omitted herein] and ordered herein will yield a return of approximately 6.10 per cent on the above rate base, which rate of return is a fair and reasonable rate of return on said rate base and which rates are reasonable and just.

4. That this order is the result of a complete investigation, and its issuance can close the case.

5. That the rates ordered herein shall be the future permanent rates of the Commission, and this order supersedes the order of September 29, 1948, November 9, 1948, and December 11, 1948, issued in this docket.

6. That the bimonthly reports required by the order of September 29, 1948, are no longer necessary.

7. That the rates and rules prescribed herein together with indexes be submitted to this Commission by the Lake Superior District Power Company on standard rate sheets.

8. That this case may be closed.

The Commission concludes:

That it has jurisdiction under §§ 196.03, and 196.37 to enter an order prescribing the rates and rules in the attached appendix [omitted herein] and that such an order should be issued.

Re Citizens Utilities Company

Case No. U-1007, Order No. 2100
October 2, 1951

APPLICATION *of water company for rate increase; modified rate increase authorized.*

Valuation, § 319 — Working capital — Water utility.

1. The working capital allowance for a water utility was computed by taking one-twelfth of the operating expenses less depreciation expense and taxes, p. 53.

Return, § 115 — Water company.

2. A rate of return of between 6 per cent and 6.5 per cent was found to be fair and reasonable for a water company, p. 53.

By the COMMISSION: This matter was brought before the Commission by the filing of an application by the Citizens Utilities Company, a corporation, for an increase in its water rates at Wallace, Mullan, Burke, and surrounding territory, all located in Shoshone county, Idaho.

The matter was set for hearing in the district courtroom, Wallace, Idaho, on May 25, 1951, at 10 o'clock A. M. At the time and place designated in the notice of hearing, the hearing was commenced before the entire Commission and the following appearances entered: Charles E. Horning, Attorney at Law, Wallace, appearing on behalf of applicant; R. E. Larsen, Utilities Auditor, Idaho Public Utilities Commission, Boise, appearing on behalf of the Commission; Mrs. J. A. Nicholson, President, Wallace Community Council, Wallace, protestant; W. L. Hart, Mullan, appearing on behalf of the Community Council, of Mullan, protestant; Floyd H. Jacobson, Mullan, appearing on behalf of village of Mullan, protestant; Henry H. Hulter, Mullan, appearing on behalf of Miners Union No. 9, International Union of Mine, Mill & Smelter Workers, protestants.

[1, 2] At the beginning of the hearing the applicant moved to amend its application that related to Schedules 2 and 3 and Rules 13 and 15; these were for sprinkling charges proposed to be made during the months of June, July, August, and September of each year. The amendments were approved.

The Citizens Utilities Company is a Delaware corporation, with its principal place of business and post office address at Greenwich, Conn., and is qualified to do business as a foreign corporation in Idaho. The Citizens Utilities Company operates both electric and water utilities in Idaho, and operates electric, gas, water, telephone, and cold storage facilities in Washington, Colorado, Ari-

zona, Maine, Vermont, and California.

During the hearing on this matter there was submitted an exhibit designed to show the income statement for the years 1946 through 1950 actual and projected for 1951 to show the effects of the proposed rates. This exhibit then related the net operating income for each of these years to the rate base to give the earnings on these various rate bases. The bases that were used followed the formula that is generally used by this Commission in finding the value of property for rate-making purposes. The calculations departed from that of the Commission in only one respect, there was used 1/12 of operating revenues for determining working capital where we use 1/12 of operating expenses less depreciation expense and taxes. When we adjust the base as used by the company to our usual formula we would get the following rate base as of December 31, 1950:

Average New Plant	$400,451
Working Capital	1,100
Materials and Supplies	5,380
Total	$406,931

We therefore determine that the company should be allowed a fair return on a base of $406,931. For the year 1950, the net operating income produced a return of 3.30 per cent and for 1950 after giving effect to the proposed rates, this return would have been 7.32 per cent on this base.

In its application, the company proposed a flat rate sprinkling charge of $2.50 per month for the months of June, July, August, and September; in the amendments to the application the company changed this to 70 cents per month per outside tap for outside use of water. This is in addition to all other charges as contained on Schedule 2. We will agree that some charge should be made for lawn and gardening sprinkling, but we do not agree that the situation in this territory is such as to justify such a high rate. We are of the opinion that outside taps should come under the provisions of Schedule 2, and that this schedule as amended, should be revised as follows:

SCHEDULE 2

Residential Flat Rate

Availability

This schedule applies to all unmetered residential customers served by the company in the towns of Wallace, Mullan, and Burke.

Applicability

Applicable for all residential use of water.

Monthly Rate (Inside Taps)

First cold water tap	$1.40 per mo.
Two cold water taps	1.95 per mo.
Three cold water taps	2.25 per mo.
Four cold water taps	2.45 per mo.
Five cold water taps	2.65 per mo.
Over five—per cold water tap	.10 per mo.

Tax Adjustment Clause

Bills rendered are subject to increase by the applicable proportionate part of any increase in Federal, state, or local taxes, imposts, levies, or assessments imposed on the company. Any such addition will be first submitted to and approved by the Idaho Public Utilities Commission before becoming effective.

In Exhibit 18, the company set forth what it termed its required rate of return; this exhibit shows the capitalization broken down by types, the percentage of each to the total, the average bid price, and the yield ratio. The required rate is found by multiplying the yield ratio by the per cent of total and adding the products this process gives a ratio of 7.03 per cent with 10 per cent for financing costs, gives the total of 7.73 per cent. The greater portion of this total is pro-

duced by common equity and any change here would affect the total in greater proportion than any change in the other components. As the witness testified, this calculation would change from day to day depending on market conditions and many other factors so that the return shown here is not a static condition. In fact, during the past years this sort of calculation has resulted in required returns from 5.66 per cent to 9.44 per cent, but was always within this range. With the adjustment we have made in the rates for the outside use of water, the company will have a return of between 6 per cent and 6.5 per cent; this return we conclude to be fair and reasonable.

The Citizens Utilities Company serves water to Wallace, Mullan, and Burke, each has a different source of supply, and one is not interconnected with the other. But the system has been considered as a whole and the operating statement and investments as submitted during this proceeding was for the total not being separated for each area. The accounting, billing, maintenance, construction, warehousing, and managing is accomplished from the general office in Wallace and this procedure has previously been approved by this Commission. This was objected to during the hearing by the protestants from Mullan, in that they were of the opinion that they were being required to pay for extensions and services in other parts of the system. We do not think that this condition is so as the rate structure is designed to give a return on the total system and is based on the use of water in each unit.

Finding

We find that the Citizens Utilities Company is a public utility under the laws of the state of Idaho, and as such is subject to the jurisdiction of this Commission.

That the company did not receive a rate of return during 1950 that is fair and reasonable on the investment in utility plant devoted to the public service.

That the company should be allowed a reasonable and fair rate of return on a rate base in the amount of $406,931.

That a return of between 6 per cent and 6.5 per cent is fair and reasonable.

ORDER

It is therefore *ordered*, that Schedule 1, attached to the application, is hereby approved.

That Schedule 2, as amended, should be revised and conform to the schedule as heretofore outlined.

That Schedule 3, attached to the application, is hereby denied.

That the Citizens Utilities Company submit tariffs in compliance with this order for the Commission's approval, and that said tariffs become effective on the date of our approval thereof.

Ex Parte Westside Transit Lines, Incorporated

No. 5652, Order No. 5771
June 18, 1951

APPLICATION *for authority to increase transit fares by instituting intercity zones; denied without prejudice.*

Expenses, § 57 — Interest on borrowed capital.

1. Interest on borrowed capital cannot be regarded as a proper operating expense for rate-making purposes, p. 57.

Valuation, § 36 — Measures of value — Cost of plant.

2. The cost of plant, when first devoted to public use, represents the most acceptable value for rate-making purposes, p. 57.

Return, § 108 — Transit company.

3. A return of 6 per cent for a transit company was considered reasonable, p. 58.

Depreciation, § 72 — Transit company — Motor coaches.

4. A 10 per cent annual depreciation accrual for motor coaches from the date first placed in operation was authorized for a transit company, p. 58.

By the COMMISSION: In this proceeding, Westside Transit Lines, Inc., seeks the authority of this Commission to increase its rates of bus fares by the institution of intercity zones and to charge its passengers 5 cents per zone. The present rates on all lines except the Avondale-Algiers express is 5 cents per passenger. In the latter case, it is 10 cents per passenger. The present rates are for a full terminal-to-terminal ride without regard to zones.

Westside Transit Lines, Inc., is a corporation organized under the laws of the state of Louisiana, maintaining local transit service by the operation of motor coaches for public convenience in the cities and communities of Algiers, Gretna, Harvey, Marrero, and Westwego, Louisiana. It also operates intercity from Avondale and Bridge City, Louisiana, through all of the above-mentioned cities and communities to Algiers, Louisiana. As such, it is a public utility as defined in Section VI of the Constitution of 1921 and subject to the jurisdiction of this Commission.

This matter was called for hearing on December 12, 1950, and the case was continued on motion of protestants. It was again called for hearing on January 25, 1951, and was continued on motion of the Commission. It was tried on March 7, 1951,

at a regular Baton Rouge session of the Commission and was taken under advisement.

In the interim between the filing of the application for adjustment of rates and the date that the case was tried, the engineering and accounting staff made investigations as to the operation of the busses, the number of passengers carried on various routes, the method of operation, and the operating revenues and expenses. The staff presented exhibits showing the results of these investigations and made recommendations.

[1] The applicant presented testimony and alleged that it did not realize a fair return on its investment for the year 1950, but the accounting staff disagreed and showed that the return for that year on the net investment was at least 6 per cent. The chief difference between the witness for the company and for the Commission was that interest on borrowed funds was regarded by the company witness as an operating expense. There were also differences of opinion as to plant values and depreciation reserve requirements.

Interest on borrowed capital cannot be regarded as an operating expense for rate-making purposes for obvious reasons as were explained by the staff on cross-examination.

[2] The plant, as shown in the company's exhibit, amounted to $335,199.42, and the reserve for depreciation was shown as $85,175.93. These amounts were based on the purchase cost of the property as a going concern, with arbitrary allocations of the said cost to the various items of equipment, the chief items of which are motor coaches. The net plant was, therefore, shown by the company as $250,023.49.

This Commission holds to the theory that the cost of plant, when first devoted to public use, represents the most acceptable value for rate-making purposes. These costs were available to the Commission's staff and were determined to be $474,473.53, and the accumulated depreciation on the books of the former owners continued at the same annual rates through 1950 amounted to $210,821. The net plant, therefore, according to the staff, was $263,652.53, to which was added $5,890.80 for unused materials and supplies, making a total rate base of $269,543.33. A return of 6 per cent on the basis of the so-called Power & Light Company formula is $17,578.14.

The staff presented testimony showing that the net operating revenue for the year 1950 amounted to $18,131.90, or $553.76 in excess of a 6 per cent return on the net plant investment. The company's Exhibit No. 6 shows a net profit of $1,625.46 after having deducted $12,456.41, representing interest. Thus the company's net operating revenue, according to its exhibit, was $14,081.87. It, however, had charged $46,750.08 for depreciation, whereas the total depreciation at the same rate but based on actual original cost, amounted to $42,262.38, or $4,487.70 less than that shown in the company's exhibit. After correcting for this difference, the net operating revenue would amount to $18,569.57. This is within $500 of the staff's exhibit, which takes into account a few minor adjustments.

The Commission has carefully considered all of the testimony in this case including certain facts that indicated a downward trend of operating revenues and of operating expenses over the past two years. Despite these downward trends, however, the staff's testimony showed that as the result of an exhaustive audit of the plant accounts and the operations, the return on the net plant investment for the year 1950 exceeded 6 per cent. And there is no assurance that with proper and efficient management such a return will not continue.

[3, 4] After having considered the testimony adduced, the applicable laws and the public interest involved, it is the opinion of this Commission and the Commission finds that:

1. A fair and equitable rate of return on the net plant investment of the applicant in this proceeding is 6 per cent per annum.

2. The plant accounts in this instance should reflect the original cost when first devoted to public use.

3. The depreciation reserve requirements should be based on annual accruals at a reasonable rate, which for the motor coaches involved in this proceeding is 10 per cent per annum, from the date first placed in operation.

4. The net operating revenues for the years 1948, 1949, and 1950, as shown by the staff of this Commission, exceeded a return of 6 per cent in the amounts of $16,617.58, $18,355.06, and $553.76, respectively. These amounts are accurate and reliable.

It is accordingly *ordered* that:

1. The application for increases in motor coach fares be and it hereby is denied subject to the provisions of this order.

2. This order is without prejudice to applicant's right to refile the said application in October, 1951, when a more accurate determination can be made of the apparent downward trend in net operating revenues.

3. If and when the said application is refiled, this Commission's staff shall carry its audit forward to the latest available date and determine the net operating revenues, the net plant, and other pertinent data using the amounts presented in this proceeding as the starting point of such investigation.

Re Belmont Telephone Company

2-SB-456
August 10, 1951

APPLICATION *for authority to issue common stock and evidences of indebtedness to the Rural Electrification Administration; application relating to evidences of indebtedness to Federal agency dismissed for want of jurisdiction and issuance of common stock authorized.*

Security issues, § 17 — Commission jurisdiction — Loans from Federal government.

1. The Commission has no jurisdiction over a telephone company's application for authority to issue evidences of indebtedness to an agency of the United States Government pursuant to the Rural Electrification Act, p. 59.

Security issues, § 49 — Debt ratio — Loans from Federal government.

2. The ratio of common stock to total capitalization is not a determining factor in authorizing the issuance of common stock by a telephone company obtaining loans for rural telephone facilities pursuant to evidences of indebtedness to the United States of America in connection with loans made pursuant to the Rural Electrification Act, p. 60.

By the COMMISSION: On May 23, 1951, the signers of the articles of incorporation of Belmont Telephone Company filed an application with the Commission, under the provisions of § 184.05 of the Wisconsin Statutes, for authority to issue $27,000 par value of its common stock and $133,000 principal amount of evidences of indebtedness to secure funds to acquire all of the assets of Belmont and Pleasant View Telephone Company and, also, to pay for net additions and extensions to said plant in connection with the installation of new central-office equipment and the conversion of the entire system to dial operation. With the application the company submitted a copy of a telephone loan contract, dated as of April 24, 1951, between Belmont Telephone Company and the United States of America, which includes the terms and conditions of the proposed borrowing by the company of said $133,000 through the Rural Electrification Administration of the government at an interest rate of 2 per cent per annum, the principal payments to be amortized over a period of thirty-five years.

[1] Since the filing of the application in this proceeding, the Wisconsin legislature has enacted Chap 389 of the Laws of 1951, which amends § 184.01 (3) to read as follows:

" 'Securities' means capital stock and evidences of indebtedness of a public service corporation, not including, however, (a) any obligation falling due one year or less after its date and

bearing date not later than the day of sale; or (b) any obligation issued to the United States of America in connection with loans for rural telephone facilities made pursuant to the rural electrification act of 1936, as amended, or (c) any securities issued by a corporation organized under Chap 185."

It is clear, therefore, that any approval of the proposed $133,000 REA loan is beyond the power of this Commission regardless of the amount, ratio, or the terms and conditions thereof. That portion of the prayer of the pending application relating to the REA loan will, accordingly, be dismissed for want of jurisdiction and the Commission will consider only that portion which requests authority to issue $27,000 par value of common stock.

[2] The applicant is a corporation, without assets or liabilities, newly organized for the purpose of acquiring all of the assets of Belmont and Pleasant View Telephone Company for the sum of one dollar and the assumption of its indebtedness (see Docket 2–U–3582). The present utility has been rendering telephone service to approximately 376 stations in and around Belmont, Lafayette county.

The Commission staff has reviewed the data now on file with the Commission regarding this property and, in the light of its general knowledge regarding the depreciated condition of said property, is satisfied that the fair value thereof is at least equal to the indebtedness to be assumed by the applicant, which is reported to be approximately $16,500 as of December 31, 1950. Inasmuch as the financing plan contemplates the prompt retirement of that debt, the net effect of the transfer of property will be the substitution of new common stock, in lieu of said debt, to represent the net worth of the acquired assets. The proceeds from the balance of the common stock will be used to pay for net additions to its telephone utility plant in service.

It will be noted that the proposal of the company will result in the following security structure and the ratios of each class of security to the total capitalization:

	Amount	Ratio
Common stock	$27,000	16.9%
REA loan	133,000	83.1
Total capitalization	$160,000	100.0%

The above ratio of common stock is low but the Commission's consideration of that low ratio is limited by the provisions of § 184.05 (4) of the statutes, which has been amended, by Chap 389, Laws of 1951, to read as follows:

"The amount of securities of each class which any public service corporation may issue shall bear a reasonable proportion to each other and to the value of the property, due consideration being given to the nature of the business of the corporation, its credit and prospects, the possibility that the value of the property may change from time to time, the effect which such issue will have upon the management and operation of the corporation by reason of the relative amount of financial interest which the various classes of stockholders will have in the corporation, and other considerations deemed relevant by the Commission. *The provisions of this subsection shall not apply to common stock issued by a public service corpo-*

ration with loans for rural telephone facilities made pursuant to the evidences of indebtedness to the United States of America in connection with loans for rural telephone facilities made pursuant to the rural electrification act of 1936, as amended." (Italics supplied to indicate the amendment.)

It is clear that the above-quoted amendment to the statute applies directly to the facts presented in this docket, and that, when these conditions prevail, the ratio of common stock is not required to be a determining factor in authorizing the issuance of the common stock as prayed for in the pending application.

The Commission finds:

1. That the proposed issue of $27,000 par value of common stock complies with the provisions of Chap 184 of the Wisconsin Statutes.

2. That the financial condition, plan of operation, and proposed undertakings of the corporation are such as to afford reasonable protection to the purchasers of the common stock herein to be authorized.

3. That the terms, conditions, or requirements specified in the certificate hereinafter set forth are reasonably necessary to protect the public interest.

The Commission concludes:

1. That it is without jurisdiction to entertain that portion of the pending application requesting authority to issue $133,000 of evidences of indebtedness to an agency of the United States Government, as described in the first paragraph of this certificate of authority, and that said portion of the pending application should be dismissed for want of jurisdiction.

2. That it has jurisdiction, by virtue of § 184.06 of the Wisconsin Statutes, to issue a certificate authorizing the applicant to issue $27,000 par value of common stock and that such order and certificate should be entered.

ORDER

It is *ordered:*

That that portion of the prayer of the pending application requesting authority to issue $133,000 of evidences of indebtedness to an agency of the United States Government be and the same is hereby dismissed.

Certificate

It is therefore hereby certified:

That Belmont Telephone Company, a Wisconsin corporation, be and the same is hereby authorized to issue 1,350 shares of its common stock of the par value of $20 per share, making a total issue of $27,000, subject to the following terms, conditions, or requirements:

1. That said 1,350 shares of common stock shall be issued and sold for money only and at not less than the par value thereof, and the funds derived therefrom shall be used: (a) to acquire all of the assets of Belmont and Pleasant View Telephone Company for the sum of one dollar and the assumption of its outstanding indebtedness, (b) to pay and retire all of the indebtedness so assumed, and (c) to pay for net additions and extensions to its telephone utility plant in service.

2. That said Belmont Telephone Company shall file with the Commission, within thirty days after the issuance of the common stock herein authorized, a verified statement showing, in detail, the facts in relation thereto and the disposition of the proceeds derived therefrom.

3. That said Belmont Telephone Company shall not issue the common stock herein authorized or receive any money or property therefor, either directly or indirectly, until this certificate shall have been recorded upon the books of the corporation.

FLORIDA RAILROAD AND PUBLIC UTILITIES COMMISSION

Re Common Carrier Bus Lines

Docket No. 3330-CCB, Order No. 2615
October 15, 1951

APPLICATION *of bus company for approval of intrastate passenger rates; modified rate increase authorized.*

Return, § 99.1 — Motor carriers' operating ratio.

1. Motor carriers were found to be in need of additional revenues where their operating ratio for a 3-year period varied between 87 and 99.6 per cent, p. 62.

Return, § 99.1 — Motor carriers — Relationship of operating ratio to quality of service.

2. An operating ratio of 95 per cent for motor carriers is not conducive to the rendition of that type of service to which the traveling public is entitled, p. 62.

Rates, § 417 — Motor carrier fares — Shortest mileage basis.

3. Proposed motor carrier rates which ignore the fact that fares should be computed on the shortest available mileage between points of origin and destination and which make the route traveled the basis for mileage instead of the short mileage will not be approved, p. 63.

APPEARANCES: A. Y. Milam and Wayne K. Ramsey, Jacksonville, appeared for Florida Greyhound Lines and Tech Greyhound Lines; A. Pickens Coles, Tampa, appeared for Tamiami Trail Tours, Inc.; Clifford T. Inglis, Jacksonville, appeared for Southeastern Greyhound Lines and Alaga Coach Lines; James S. Wilson, Albany, Georgia, Vice President and General Counsel, appeared for Modern Coach Corporation.

By the COMMISSION:

[1, 2] On May 22, 1951, the common carrier bus lines operating within the state of Florida and transporting passengers in motor busses filed their joint petition with this Commission seeking approval of certain increases in the passenger fares applicable within the state of Florida for the intrastate transportation of passengers in motor busses. The Commission held a public hearing on said application in Tallahassee on June 18, 1951, and received testimony in support of the proposed increases. No one appeared to protest the granting of the increases sought by the carriers.

The proposed increases in passenger fares were predicated upon the fact that during the past several years motor bus common carriers of passengers in the state of Florida have suffered a progressive deterioration in net operating revenues directly traceable and attributable in varying degree to the following major factors:

(a) A steady and progressive decline in average load factor of equipment operated;

(b) A steady, progressive, and recurring decline in gross revenues achieved from passenger carriage;

(c) An operating expense per bus mile steadily increasing year by year, with like increase year by year in operating expense per passenger mile.

These factors have combined so as to reduce carriers' net operating revenues to such an extent as to make it no longer possible for the motor bus common carriers in Florida to maintain current facilities and service unless operating revenues are improved through increased fares and charges. The only alternative to an increase in fares and charges, in the absence of any prospect for an improved load factor, appears to be in a drastic curtailment in the service now being furnished the traveling public.

In order to show up their earnings' position during this period of rising costs and declining revenues, the carriers have proposed certain zone rates which are still below the currently applicable interstate rates within the southeastern territory. A table of the proposed zonal rates is shown on Appendix "A" [omitted herein] which is hereto attached and made a part of this order. Appendix "A" also shows the present zone rates upon which currently authorized tariffs are constructed, the proposed zone rates, fare at the end of each zone, and the percentage of increase involved in the rate proposed. The applicable interstate mileage scale is hereto attached as Appendix "B" [omitted herein].

A comparison of the ratio of operating expenses to revenue for Florida Greyhound Lines for various periods will give a graphic picture of what is happening to the earnings of motor bus operators in Florida. For the twelve months ending April 30, 1948, the operating ratio for this carrier was 87.0 per cent; for the twelve months ending April 30, 1951, it was 89.9 per cent; for the four months ending December 31, 1949, it was 90.2 per cent; for the four months ending December 31, 1950, it was 99.6 per cent; and it is estimated that its operating ratio for the calendar year 1951 will be approximately 95 per cent. In other words, it costs this carrier approximately 95 cents to gross one dollar of revenue. Such a high operating ratio is not conducive to the rendition of that type service which the traveling public feels it is entitled to. Some of the carriers are actually operating in the red and others have a higher operating ratio than Florida Greyhound Lines which has been used herein as an illustration.

[3] It is obvious from the record herein, and the Commission so finds, that the common carrier bus operators in Florida are in need of additional revenues which can only be provided by increases in applicable fares and charges. However, the proposals submitted by the carriers ignore certain rate-making principles which, in the opinion of the Commission, should be

observed. The proposals ignore the fact that fares should be computed on the shortest available mileage between point of origin and destination and make the route traveled the basis for mileage instead of the short mileage. The proposals result in the through fares being computed on the mileages to and from basing or headline points or, in other words, the sum of the two or more local fares.

It is our opinion and we find that:

(1) Bus fares should be computed on the shortest available bus route mileage between points of origin and destination.

(2) Bus fares should not be computed on the basis of mileages between headline points.

(3) All such fares should end in the digit "0" or "5" and actual fares, as computed, should be increased or reduced to "0" or "5" whichever is closest to the actual fare.

(4) Minimum fares should be 25 cents.

(5) Round-trip fares should not be more than 180 per cent of the one-way fare.

(6) Commutation fares should not be more than $\frac{2}{3}$ of the regular 2-way fares.

(7) Rule 11, which provides that carriers shall not charge or receive any greater compensation in the aggregate for the transportation of persons for a shorter than for a longer distance over the same line in the same direction, the shorter being included within the longer distance, should be strictly complied with.

(8) Appendix "C" which is hereto attached and made a part of this order [Appendix C omitted herein] sets forth the zones and fares which should be approved and which, when applied to the intrastate transportation of passengers by motor busses in Florida, will be fair, reasonable, and compensatory for such transportation.

(9) Appropriate tariffs showing point-to-point fares in dollar and cents on the basis of Appendix "C," hereto attached, should be forthwith filed with this Commission and the fares and charges herein approved should become effective at 12:01 A.M., Thursday, November 1, 1951.

Now, therefore, in consideration thereof, it is *ordered, adjudged,* and *decreed* by the Florida Railroad and Public Utilities Commission that the motor bus common carriers in Florida, applicants herein, be and they are hereby authorized and directed to prepare and file with this Commission forthwith appropriate tariffs showing point-to-point fares in dollar and cents for the intrastate transportation of passengers intrastate in Florida in motor busses in conformity with the findings herein which are hereby approved and on the basis of Appendix "C," hereto attached [omitted herein], and made a part of this order.

Industrial Progress

A digest of information on new construction by privately managed utilities; similar information relating to government owned utilities; news concerning products, supplies and services offered by manufacturers; also notices of changes in personnel.

Pacific Gas & Elec. Will Spend $162,000,000 in 1952

THE Pacific Gas and Electric Company will spend about $162,000,000 for the expansion of its facilities in 1952, of which $132,000,000 will go for new or enlarged electrical equipment and the remainder for gas and other properties, according to James B. Black, president. It is estimated that during the coming year the company's electric sales may total 14,000,000,000 kilowatt-hours, compared with 12,600,000,000 in 1951 and 11,000,000,000 in 1950.

Booklet on Good Lighting For Home Study

"HOW TO MAKE HOMEWORK LIGHTER," a new 8-page, two-color booklet for use by electric light and power companies and cooperating dealers in disseminating information on the application of good lighting principles to home study, has been prepared by the Better Light Better Sight Bureau.

This brochure is a revised and enlarged version of a popular and widely used folder previously published under the same title. The copy is informal and designed to appeal both to parents and to school-age children. Examples of incorrect lighting for study are illustrated and described, in contrast with photos and descriptions of correct lighting in the same setting. Included also is a description of a "Portable Study Center," which students can build, together with photos and drawings with instructions for its construction.

"How To Make Homework Lighter," may be obtained from the Better Light Better Sight Bureau, 420 Lexington avenue, New York 17, New York. This booklet is priced at $3.50 per 100, in minimum quantities of 100.

B & W Appointments

J. H. KING, vice president of The Babcock & Wilcox Company has been named to head the reorganized boiler division of the company and Luke E. Sawyer and Edward A. Livingstone, president and vice president respectively of the recently absorbed subsidiary Tube Company have been elected vice presidents of The Babcock & Wilcox Company, according to an announcement made recently by Alfred Iddles, president.

The announcement said that the boiler division of the company would now comprise what was formerly the marine department, stationary boiler and special products departments and that all of these operations would be consolidated under Mr. King.

The recent merger of the B&W Tube Company with the B&W Company will not "alter the present Tube Company organization nor in anywise change its operations and responsibilities," the announcement said. "It will operate as the Tubular Products Division, with general offices at Beaver Falls, Pa." Mr. Sawyer will be in charge of this division, Mr. Iddles said.

Bulletin Describes Spence Automatic Regulating Valves

BULLETIN 700, just issued by Spence Engineering Company, features a large cutaway illustration of a typical Spence pilot-operated regulating valve with detailed explanations of fire design features.

In addition, a panel is devoted to showing how the control function of a Spence Regulator can be changed by using a different sensitive pilot.

Copies of the Bulletin may be obtained from Spence Engineering Company, Inc., Walden, New York.

Closing Date of I.L.E. Merit Award Competition Nears

As the closing date for the mailing of entries in the 4th International Lighting Exposition's Merit Award Competition—midnight of January 31, 1952—draws near, Case Study Entries are flowing steadily into the offices of the Merit Award Committee, 326 West Madison Street, Room 818, Chicago 6, Illinois. Here they are being held until the close of the competition, when they will be reviewed by a board of six judges who will choose the winners that are to receive the 25 Gold Seal Awards of $100 each and the handsomely engraved Merit Award Certificates.

The winning entrants will be presented their awards as a highlight of the 4th International

(*Continued on page* 30)

Lighting Exposition at Cleveland next May 6th through 9th. As in past years, the winning entries will be prominently displayed at the Exposition in the Cleveland Auditorium.

In announcing the imminent closing of the competition, G. T. Morrow, chairman of the Merit Award Competition Committee, states, "We are greatly pleased with the large number of entries and the high caliber of material indicated in the case study entries now arriving. In line with the Exposition theme, "Mobilize Lighting Knowledge to Advance America's Welfare," the hundreds of outstanding lighting installation studies that have already been submitted, will provide a wealth of material that will help to demonstrate the importance and advantage of planned lighting to the Nation's defense efforts."

Slide Film for Electric Utilities Available from G-E

A NEW slide film describing the significance of electric power in our defense economy is now available from the General Electric Company.

Entitled "Invisible Battalions," the film is designed for use by representatives of electric utilities in appearances before civic, business, fraternal, and social groups. In a 15-minute presentation, it outlines the all-important role of electric power in a record productivity that has become one of our first lines of defense.

The film production is designed to be of interest to businessmen and industrialists, as well as to those who have no basic knowledge of the electric power industry. Each slide film is part of a kit which contains two narrative texts, each aimed at a particular type of audience.

One kit is available to each interested electric utility at no cost. A charge of $2 will be made for each additional copy. Kits are available from any of the G-E Apparatus Sales offices throughout the nation, or from company headquarters in Schenectady, New York.

N. Y. State Elec. & Gas Opens New 75,000-kw Addition

THE New York State Electric & Gas Corporation's new 75,000-kilowatt addition to its Goudey steam electric generating station at Westover was recently put into operation, climaxing a construction program of a little more than two years, according to Arnold W. Milliken, general manager.

The 75,000-kilowatt turbine generator—the largest single unit in the company's entire system—increases the station's production capacity from 98,750 to 173,750 kilowatts. It operates at steam pressures and temperatures among the highest in utility service.

Two other expansion programs are also under way. A 50,000 kilowatt addition to Hickling station at East Corning is planned for completion in the summer of 1952 and a

(*Continued on page 32*)

100,000-kilowatt addition to Greenidge station at Dresden is expected to go into operation late in 1953.

With the construction of the Greenidge station addition, the company's postwar expansion of its generating facilities has been extended into 1953. The total cost of this program for 1946 through 1953 is about $145,000,000, which more than doubles the total amount of the company's property at the beginning of 1946.

Under this program the company's capacity to produce electricity in its central interconnected system will be increased from about 170,000 kilowatts at the end of World War II to approximately 550,000 kilowatts in 1953, an increase of 380,000 kilowatts.

1951 Record Construction Year As First 11 Mos. Top Entire 1950

WITH still one more month's construction contract awards to be tallied, the year 1951 has topped the previous record 12-month total set in 1950 by nearly $16,000,000 it was revealed recently in F. W. Dodge Corporation figures for the 37 states east of the Rockies.

Eleven-month 1951 totals with percentages of comparison with 1950 were as follows: Non-residential, $6,229,506,000, up 33 per cent; residential, $5,859,284,000, down 6 per cent; public and private works and utilities, $2,428,-002,000, up 2 per cent.

Consolidated Edison of N. Y. To Spend $105,000,000

THE CONSOLIDATED EDISON COMPANY OF NEW YORK, INC., is planning to spend $105,000,000 for plant expansion and improvements to existing facilities this year. This will bring total expenditures of this nature since 1947 to about $530,000,000.

The company's major project is a new electric generating station at Astoria, Queens, where the first 160,000-kilowatt unit is scheduled to go into service next fall. The second unit is slated for operation a year later, with the third due in the summer of 1955.

Silex Appointment

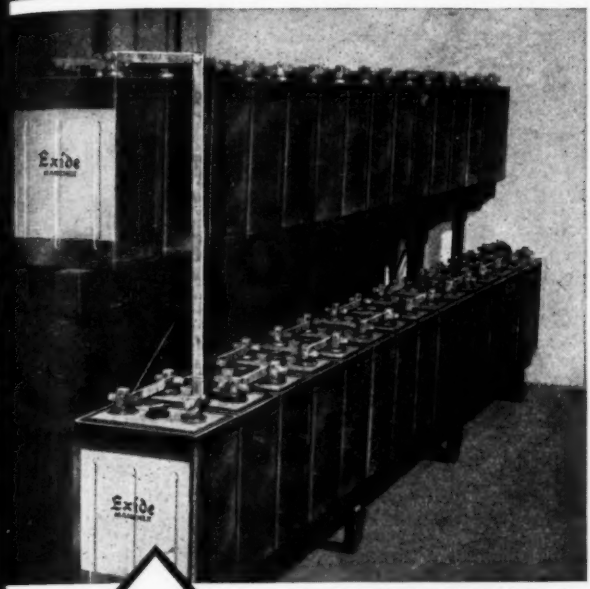
THE appointment of H. S. Perkins as general sales manager of The Silex Company was announced recently by M. G. Smith, President.

Mr. Perkins joins Silex from Landers, Frary & Clark, where he was sales promotion manager and Washington representative. Prior to that position, he was assistant to the vice president and general sales manager of Proctor Electric for nine years.

New Method for Making Dry Photocopies

AMERICAN PHOTOCOPY EQUIPMENT COMPANY is introducing a new method, which according to the announcement, "makes it possible, for the first time, to produce dry photocopies of anything almost instantly—without the slow, messy developing, fixing, washing and drying ordinarily required by present photocopy methods." The Auto-Stat is said to be based on an entirely new principle of instant and automatic developing and fixing, enabling anyone—without training or special skill—to produce clear, black and white photo-exact copies of any original in any office.

A free illustrated booklet describing the Auto-Stat is being offered by the manufacturer, 2849 North Clark street, Chicago 14, Ill.



One of two 60-cell, FME-17 Exide-Manchex Batteries providing emergency power in the Edgemoor Station.

Delaware Power & Light Co., new Edgemoor Generation Station, Wilmington, Delaware. Built by United Engineers & Constructors Inc.

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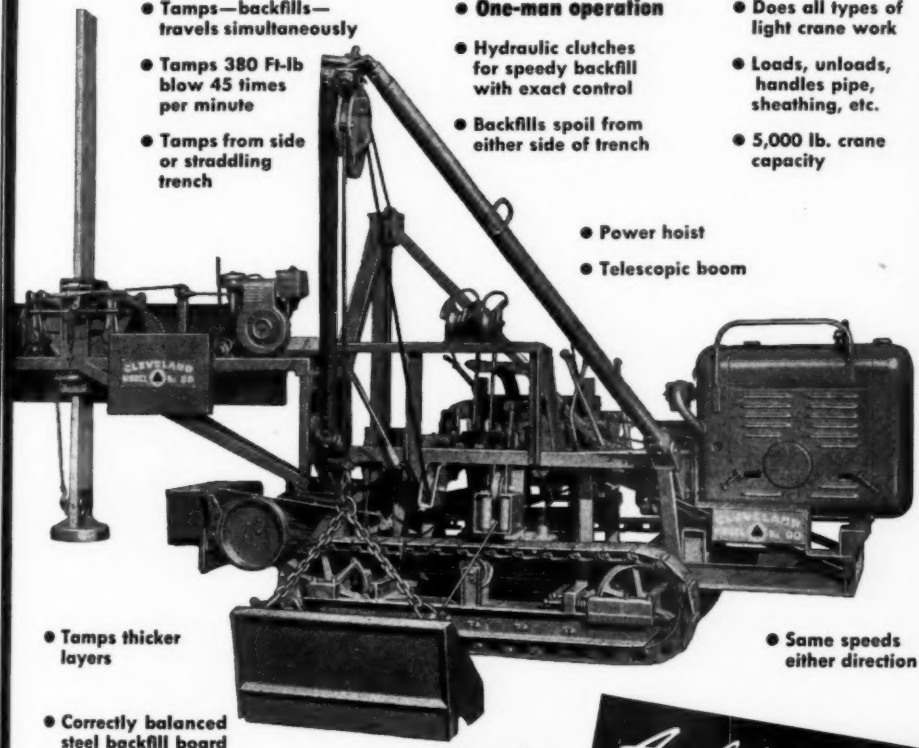

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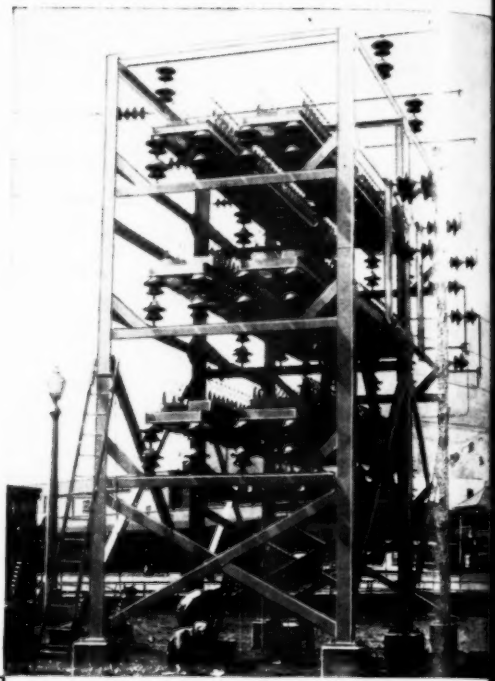
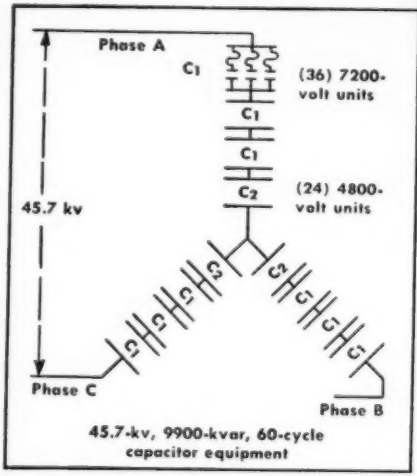


This 9900-kvar General Electric capacitor equipment, operating at 45.7 kv, 3-phase, has recently been installed in West Virginia. It consists of 396 individual 25-kvar outdoor capacitors, connected as shown in the diagram below.



45.7-kv, 9900-kvar, 60-cycle capacitor equipment

This connection diagram applies to the capacitor equipment pictured above

General Electric is now in a position to furnish capacitor equipments for all transmission-circuit voltages (equipments have already been furnished rated as high as 124 kv). These equipments are used on high-voltage circuits to supply bulk kilovars and thus re-enforce the sub-transmission voltages and also reduce thermal loading of substations and generators.

The capacitors used in these equipments are General Electric, outdoor 25-kvar units, rated 2400 to 7960 volts, depending on the circuit voltage. Units are connected in series-parallel to attain the desired voltage and kvar ratings. Individual bushing-mounted fuses are supplied for each unit.

For full information, get in touch with your G-E Apparatus Sales Office. General Electric Company, Schenectady 5, N. Y.

407-33E

GENERAL ELECTRIC